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QReview

£2.00

The reference guide to QDOS and its derivatives

Volume 1 Issue 3 March 1994

SQUIDGY ROUND THE WORLD

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FAST-NET

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IMAGE PROCESSOR 2

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QReview

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Editorial enquiries should be sent to the address given above. We welcome letters, comments, suggestions and articles from our readers. The submission deadline for the next issue is the 31st of May 1994.

Articles submitted for publication should be on a 3.5 DD disk, or microdrive, in either Quill, Perfection, Text87 or Editor format and be accompanied by a printed copy of the article. Saved Screen dumps produced with the Sbytes command are also accepted together with screens saved by most QL drawing packages (Please indicate which package you used to produce the graphics).

Advertising rates are £25 for a full A4 page, £15 for half an A4 page and £10 for a quarter A4 page. Discounts are given for multiple page adverts.

QReview is independent and not affiliated to any vendor of hardware, software or services.

QReview is produced using a QL. The software used to produce the magazine is Text87Plus4 Publisher (Software87), Linedesign (PROGS), Image Processor (DJC) and Screen Snatcher (DJC).

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... NEWS ...

MIRACLE SYSTEMS - SUPER GOLD CARD

Miracle Systems first showed their new Super Gold Card at the Quanta Edinburgh Workshop on the 12th February 1994.

The Super Gold Card uses a 68020 Motorola CPU running at 24MHz giving an overall speed increase of over three times that of the standard Gold Card. It comes with 4M of memory and incorporates a parallel interface, a much welcomed addition which speeds up printing on the QL. The card also supports up to four disk drives attached at the same time without the need for any additional hardware.

The price is £375 with 2 years warranty. Miracle also offer to upgrade a Gold Card for £225. Trade in deals for other memory expansion cards are also being offered. You can trade in your Trump Card for £50 or Super Q Board for £40 or any other memory expansion for £25 against the purchase price. In addition you can trade in a QL Centronics Adapter for £15 and a Disk Adapter for £10.

For more information write to Miracle Systems Ltd (0904) 423986, 25 Broughton Way, Osbaldwick, York, YO1 3BG.

QMON & JMON - UPDATED

The Disassemble/Monitor/Debugger has been improved. It now recognises 6800x/68010/68020/68030/68040 processors automatically and adapts stack frames and cache handling accordingly. The Trap Level can now be defined and Permanent Breakpoints are possible. New to this release (V2.07) is JMON. This has all the functionality of QMON but it has the advantage of being integrated into the Extended Environment. It can be put to sleep in the Button Frame and has moveable windows for each separate job. Upgrades are available from Jochen Merz Software, Im stillen Winkel 12, 47169 Duisburg, Germany (0203-501274), if the original was bought from QJUMP or Jochen Merz Software, if bought from Digital Precision contact DP (081) 5275493 for an Upgrade.

Jochen Merz Software updates cost DM 32,90 (return original disk). Postage and packing costs DM 9 in Europe if ordering up to DM 50 of goods. For overseas postage add DM 8 per item on to the Europe price.

SPEEDSCREEN - PRICE CUT

The Qdos display-enhancer Speedscreen is now available from Dilwyn Jones Computing (0248) 354023, in versions tested on all Qdos-compatible processors right up to the latest 68040. Speedscreen optimises QL display handling by replacing the slow, general-purpose QL ROM code with much faster routines that display text and update windows typically fives to ten times faster.

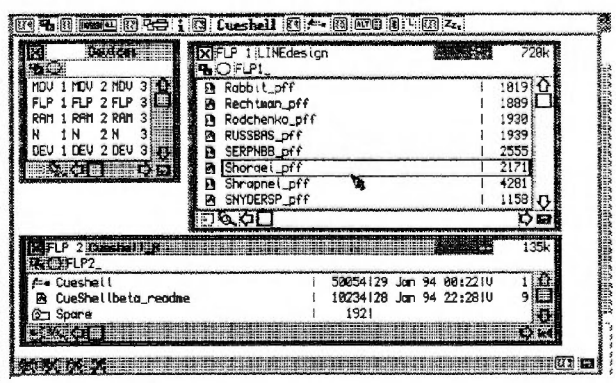
DJC has stocks of QL disk (3.5 or 5.25"), microdrive and ROM cartridge versions. The ROM is particularly recommended for un-expanded QL systems as it is twice as fast as QL memory and leaves the full 128K for other programs; the disk and cartridge do include a cut-down version for small systems, as well as seven bigger variants, fonts (character sets) and utility programs. A special version also exists for CST Thor users.

A freely-distributable demonstration version of Speedscreen is available from the Quanta library and QDOS Public Domain suppliers which just boosts the scrolling, window and cursor operations in CSIZE 1,0 - the full commercial version accelerates all founts, pixel positions and user-defined characters, as well as the smaller characters use by most applications and Psion tasks.

Speedscreen costs £15 on 3.5", 5.25" disk or microdrive. The fast QL ROM cartridge costs £30, including utilities, founts etc. on disk or microdrive - please state your set-up when ordering. Postage is free for UK addresses, overseas add £1 per program, up to a maximum of £3.

AHS - CUESHELL RELEASED

CueShell, the ultimate pointer driven desktop program for all QDOS compatible systems from Albin Hessler Software is now available.The program supports all QDOS screen resolutions and allows graphical copying of files, directories or devices using a simple drag and drop technique. It allows easy renaming of files by simply typing in the new name. Other useful additions are the easy viewing and managing of Hot Keys, easy changing of the system clock and easy managing of Jobs. Many more features are included. Cueshell costs DM 99,00 (£40) and is available from Dilwyn Jones Computing, Jochen Merz or directly from Albin Hessler, Im Zeilfeld 25, D-72631 Aichtal, Germany (07127 56280).



--- NEWS ---

DJC - TAKES ON ERGON DEVELOPMENT

Dilwyn Jones Computing is now able to supply Ergon Developments range of QL software previously only available from Italy. All the programs now come with laser-printed manuals containing comprehensive tutorials and step-by-step examples. The programs are now capable of running on any graphic resolution and are compatible with the QXL and the Atari QVME. Unfortunately DJC is unable to issue upgrades to older copies of the software, these still have to be obtained from Ergon: c/o Davide Santachiara, Via Emilio De Marchi 2, 42100 Reggio Emilia, Italy (39 522 70409). The software consists of:-

MASTERBASIC - A SuperBasic programming aid to list variables, procedure names, tokens, view return stack etc. Priced at £28.
Q-LIBRARY MANAGER - A Clever source code extractor/ manipulator for SuperBasic programs. Priced at £18.
DEA - An intelligent disassembler which has knowledge of the structure of the O/S calls. Priced at £26.
ZM /x system - A Spectrum emulator which is able to directly read Spectrum tapes. Priced at £28.
ZM/ht system - A system which compiles Z80 code into 68000 code allowing fast running of Spectrum programs. Priced at £40.
ZM/128 - A Spectrum 48k/128k emulator which gives dynamic hardware selection, fast bank switching and AY sound chip emulation. It can only be bought with one of the other ZM programs. Priced at £10.
OPEN WORLD - A graphics conversion utility to convert GIF, TIF, IFF and CUT images to a QL screen image. Priced at £18.
MUSIC MANAGER - A simple to use program to create and play tunes on your QL. Priced at £12.
ERGON FLOPPY DISK UTILITIES - A fast and powerful disk editor with facilities to search, edit, collect and recover corrupted files (on DD, HD or ED disks). It can also read some alien disk formats. Priced at £18.

The above prices are inclusive of P&P in the UK , to other countries add £1.00 per program up to a maximum of £3.00.

Call DJC on (0248) 354023 for further details.

NEW PRODUCTS FROM JÜRGEN FALKENBERG

Jürgen Falkenberg who produces the QL Hard disk interface QL-HDD-Card has released two new products. The first is called the IIO-Card. It is an A/D, D/A, 32 I/O, Co-processor with 32K RAM. The second product is called the PRG-Card and is an eprom and GAL programmer. For more information in the UK contact W.N. Richardson & Co. (0753) 888866, 18-21 Misbourne House, Chiltern Hill, Calfont St. Peter, SL9 9UE.

Jürgen Falkenburg Computer Technik (Germany 07231 81058) can be be reached at Thanweg 36, D-7539 Ersingen, Germany.

ADDRESS BOOK AND LABEL PRINTER UPGRADED

Address Book and Label Printer from Dilwyn Jones Computing has now been upgraded to version 13.

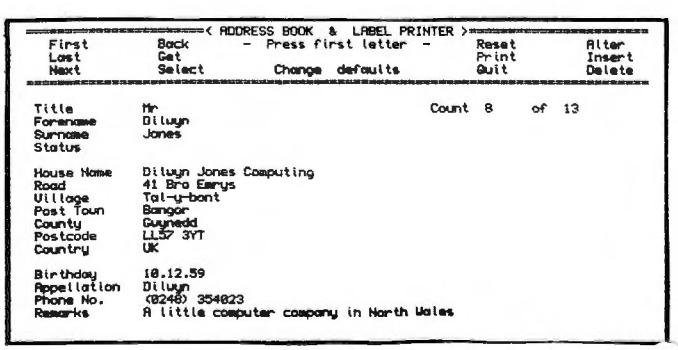
The program is a simple-to-use Archive database for holding lists of names and addresses and a few other snipits of information. It also includes specialised printing on various sizes of labels.

The new version has a new birthday facility to allow the extraction of names and addresses based on their date of birth. This can be for a given month or between given dates in that month - useful if you wish to avoid the occasional embarrassment of forgetting a friend's or relative's birthday ! Also included in this release is the ability to print blank lines between entries listed in the "full page width" mode.

PROGS STOP SELLING THE PAINTER

PROGS of Belgium have stopped distribution and development of their software The PAINTER, The ClipART and Qractal. If you would like to obtain any of these products they can still be ordered from Dilwyn Jones Computing.

Address Book and Label Printer costs £15 (add £1.00 for overseas postage). Upgrades from earlier versions , including a new manual, cost £2.00 (please send master disk back). DJC (0248) 35402.



--- NEWS ---

NEW PRINTER DRIVERS FOR PLUS4

Software87 the publisher of the wordprocessor Plus4 (aka Text87) has just released several new printer drivers for Plus4.

The first is called Typeset94-Deskjet and is an upgrade of the original Typeset90-Deskjet. The driver now supports the latest models of the Hewlett Packard ink jet range of printers including the 310, 510 and 550. It also supports a wider range of internal and cartridge founts than before. The price is £29 or £10 if upgrading from Typeset90-Deskjet.

Fountext94 replaces the printer driver Fountext88. It now includes a new high-resolution driver for 24-pin and compatible bubblejet printers printing at 180x180 dots per inch. An extra disk containing additional founts is also supplied. The price for fountext94 & founted89 (Screen fount editor) is £39. To upgrade from Fountext88 is £10.

Typeset94-II is a dedicated driver for the Hewlett Packard Laserjet II printer. It supports a selection of HP fount cartridges. It is priced at £49.

Typeset94-IV is a dedicated driver for the Hewlett Packard Laserjet III or IV. It supports the built-in founts of the printers. It is priced at £49.

For more information write to Software87 (071 485 9008 2pm-5pm), 33 Savernake Road, London, NW3 2JU.

PROGS RELEASE LINEDESIGN VERSION 2

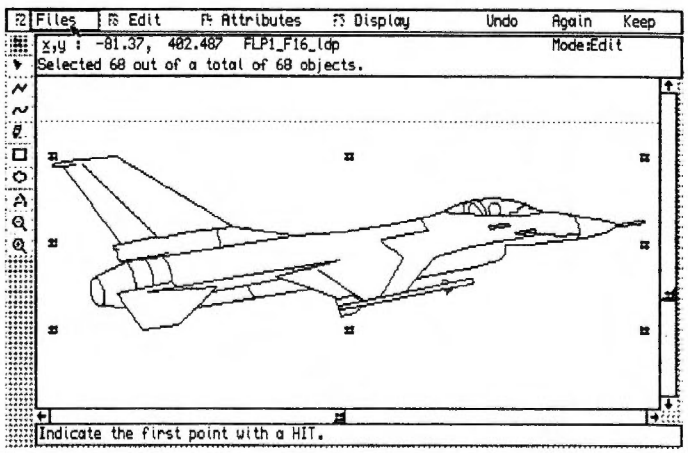
Less than a year after the initial release of version 1 PROGS have released version 2 of LINEdesign, the vector drawing program for the QL. It has been completely re-written and now stands at over 300k, with PROforma the software that produces the display and printing facilities.

The new version is much faster than the original and has a much easier interface allowing the easy selection and manipulation of objects on a page (an object can be a single line, a piece of text or a complex line filled drawing).

The new version is supplied with a lot more founts (about 130) which also have a larger amount of special characters included. A much needed and welcomed addition is that of a pound sign in most of the founts. It can also include QL 32k screen bitmaps. Many more features are included and more are planned. The minimum memory requirement is one megabyte.

Upgrades from LINEdesign v1 can be obtained by sending the program disk to PROGS (Belgium 016 48 89 52), Haachtstraat 92, B-3020 VELTEM, Belgium. The upgrade costs 1000 BEF (roughly equivalent to £20) until April 1st when it will become 2500 BEF. They accept EuroCheques in BEF, Visa, Eurocard and Mastercard.

LINEdesign v2 can be obtained from PROGS priced at 5000 BEF. DJC and Software87 can also supply LINEdesign v2, see their adverts for further details.



DJC - FILEMASTER UPGRADED

Filemaster, the simple-to-use file maintenance program, has been upgraded to take into account the hardware developments that have taken place since its release in 1991.

The program's author, Joe Haftke, has now doubled the amount of selected files. The program can now manipulate up to 288 (subject to Free Memory). The Directory functions of the "DIR MENU" are now not restricted to any number of files, the only restriction being the amount of free memory available. Provided Filemaster is not limited by available memory, the program performs satisfactorily on QLs fitted with Miracle Systems Trump Card as well as the Gold Card.

Filemaster costs £12.00 and can be obtained from Dilwyn Jones Computing (0248) 354023, 41 Bro Emrys, Tal-y-Bont, Bangor, Gwynedd, LL57 3YT. An upgrade from the older versions of Filemaster costs just £2.00 in the UK or £3.00 for overseas, please return your master disk when applying for an upgrade.

--- NEWS ---

GRANGE TECHNOLOGY LIMITED RELEASE GT-PROLOG/QL

Grange Technology Limited have released GT-Prolog, an advanced implementation of Prolog, specifically tailored to exploit the facilities of the QL and QDOS.

Prolog is a language that exploits knowledge based representational techniques. A classic example to show the use of Prolog is "How do you place eight queens on an empty chessboard so that no queen is attacked by any other queen". This problem is solved with only a screen full of Prolog code.

GT-Prolog fully supports the Edinburgh dialect and includes the appropriate library facilities and development aids. This dialect is highly compatible with current Prolog products including application code, documentation and training material.

The product features an integrated program development environment including an editor, debugger and compiler. Programs can be compiled directly from the editor and any errors can be flagged within the editor for correction. The debugger can be enabled or disabled at any time and allows the setting of multiple spypoints which cause the program to be interrupted. The current state of the program can then be examined. The program needs at least 640K of memory for the full benefits of the environment to be available.

GT-Prolog can be obtained from Grange Technology Limited (0235) 851818, Rosebank, Stream Road, Upton, Oxon, OX11 9JG. It is priced at £89.95 including postage and packing.

[We will have a full review in the next issue]

DI-REN ANNOUNCE SYSTEM AMADEUS

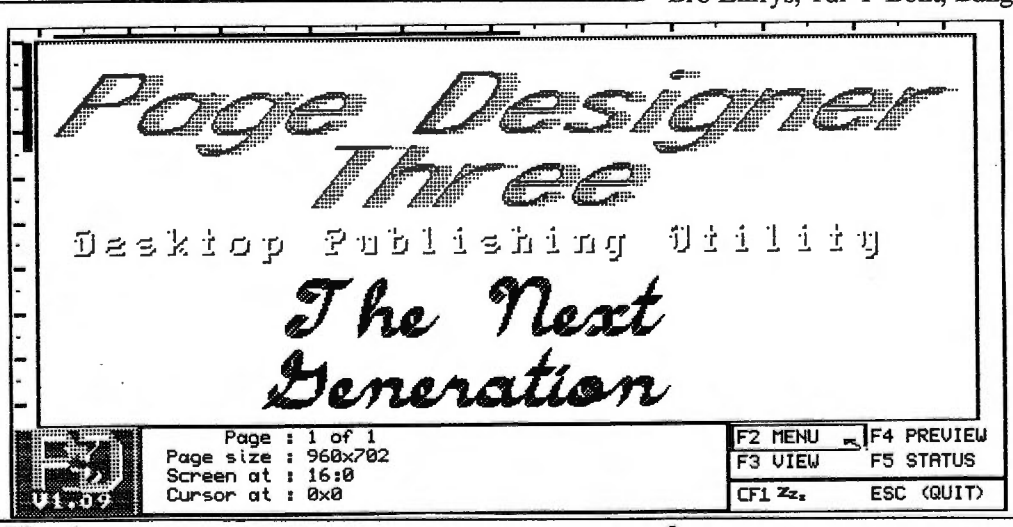
Di-Ren have released advanced information on their forthcoming data transmission system named System Amadeus scheduled for release in April 1994. It is designed to be a very low cost expansion I/O system capable of linking up to 255 devices with data transmission speeds of up to 3Mhz. It will be able to link computer terminals as well as I/O interface cards. The system will initially be released on the QL and PC. The main component of the system is a controller which can either be plugged into a centronics port, RS232 serial controller configured as DTE (subject to the serial speed) or the QL Rom port controller. The projected price for a controller is around £30. The first interfaces to become available will be a Centronics printer interface , a RS232c interface capable of speed up to 115000 baud, a sound interface , originally announced as the DPR020 Voice Analyser, and a DIY interface for people who want to add their own devices to the system. The projected individual prices for these interfaces are between £25 and £40. For further information send a SAE to Di-Ren , 59 William Street, Walsall, WS4 2AX or DJC.

DJC - PAGE DESIGNER 3 UPDATED

Page Designer 3 version 1.09 is now being supplied by Dilwyn Jones Computing. This version includes several new features requested by users of the program.

The first is the facility to zoom in to a factor of 5 when editing, making it easier for fine detailed work. An extra option to invert the page colours is now given and the 'Paint Fill' command is now able to fill with red or green in addition to the usual white. An additional option called Overstrike has been added to the print menu, allowing non-offset multiple pass printing. In the process of implementing these features a number of bugs were also fixed.

If you would like a Free upgrade send your master disk with return postage to Dilwyn Jones Computing (0248) 354023, 41 Bro Emrys, Tal-Y-Bont, Bangor, Gwynedd, LL57 3YT.



Owing to the long delay in releasing PD3 it is possible that DJC has not contacted everyone who enquired or placed an uncashed order with them. If you requested further information or placed an order from DJC for Page Designer 3 and have not yet been contacted please get in touch with DJC so they can put their records straight.

--- NEWS ---

PROGS RELEASE PROFORMA

PROForma from PROGS is a library of routines to manage and display vector graphics and fonts on raster devices like screens and printers. The name actually stands for 'PROGS Font & Raster Manager'.

PROForma was originally developed as the graphics library for Linedesign but it is suitable for developing any application which requires high quality output. As a library, PROForma has the form of an extension thing and is specifically designed to be called efficiently from C68. However, it is quite easy to access PROForma from any other programming language. The PROForma library only needs to be loaded once, independent of the number of applications which use it. Any font loaded can also be shared between applications.

PROGS plan to continue developing PROForma allowing it to be used in full colour, allowing the use of high quality colour printers. They also hope to add dashed lines, some variations on line caps, line joins and maybe even calligraphic lines. They are also looking at developing special versions to make optimal use of the 68030 or higher processors and floating point co-processors.

PROForma is priced at 5000 BEF and can be obtained from PROGS (Belgium 016 48 89 52), Haachtstraat 92, B-3020 VELTEM, Belgium.

[PROGS have produced a 12 page extract of the PROForma manual as general information on the product. If you would like a copy send a SAE (at least 29p) to the QReview address marking it PROForma Info.]

QD NOW UP TO VERSION 6

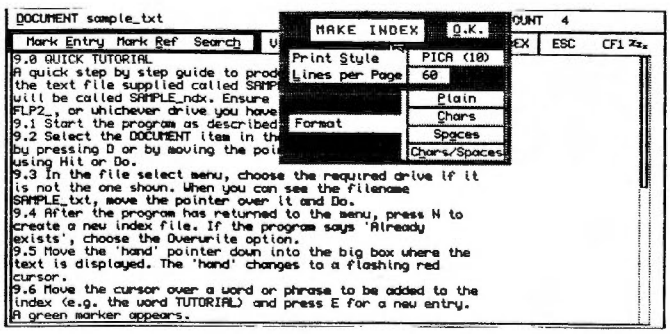
QD, the Pointer Interface Editor from Jochen Merz Software is now at Version 6. This version includes selective automatic tab compression and expansion. This feature can save between 30% and 40% of the file space as it compresses all the spaces to tabs when saving a file. When the file is loaded the program expands them automatically. Another nice feature is the ability to position the cursor over a bracket, press a key combination, and the matching bracket is found. A permanent line and column display is now given and the overall speed of the editor and line handling has been increased.

QD can be obtained from Jochen Merz Software (Germany 0203 501274), Im stillen Winkel 12, 47169 Duisburg, Germany. The price is DM 125, to upgrade from QD v5 costs DM 26,90 and from v4 costs DM 49,90. See page 3 for the Postage and packaging costs.

DJC RELEASE QINDEX

Qindex is a program that produces sorted indexes, for a book or file, from a plain text file or a Quill doc file. Unlike other programs Qindex loads the file to be indexed and then allows the user to mark the words or phrases to be used in the index directly. Multiple files can be used to build a single index, useful if a book is made up of various chapters in several files.

Once the index has been prepared it can be printed out from the program in a variety of predetermined layout styles or exported to a text editor. The layouts offer



text pitches from 10 characters per inch to 20 characters per inch which determines the number of columns used. You can also separate groups of entries starting with different characters with a blank line and insert the appropriate letters above each group.

The program works in the Pointer Environment which is supplied. It can be controlled with either a mouse or keyboard. The program is only supplied on disk and requires expanded memory and Toolkit 2. The price of the program is £20. It can be obtained from Dilwyn Jones Computing (0248) 354023, 41 Bro Emrys, Tal-y-Bont, Bangor, Gwynedd, LL57 3YT.

LATE PRESS NEWS

QTOP the user front end for QDOS from Cowo Electronic of Switzerland is now undergoing a major revision. The new version is expected to be released very soon, upgrades will be available from DJC priced at £5.

Qubbesoft P/D showed one of the first production models of their Fast-Net for QL and ST computers at a recent Essex Quanta Subgroup meeting. It was successfully used to transfer data between a Gold Card QL with a Hard Disk to a Trump Card QL with a disk drive attached.

TF SERVICES

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JM ROM.....£10	Power supply £12
8302 ULA.....£10	8301 ULA.....£10
8049 IPC £8	MDV ULA £12

Other components/(sockets etc) please phone

QL REPAIRS

Fixed price for unmodified QLs, excl microdrives. QLs tested with Thorn-EMI rig and ROM software

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QBBS - UKs first QL scrolling Bulletin Board

Megabytes of files. Messages to/from UK/Belgium/ Holland/USA/Germany for a UK phone call. TANDATA callers add SIX zeros (000000) or wait for 3 seconds of modem tone if dialling manually.

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Analogue Interface Each gives 8 analogue to digital inputs, and 2 digital/analogue outputs. For temp measurement, sound sampling etc.....£30

Data sheets. (analogue/parallel I²C chips).....£2

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SQUIDGY ROUND THE WORLD

Brilliant! Utterly brilliant!

Author Michael Crowe deserves a pat on the back, a kiss on the cheek and a cheque in the post for creating this *'colourful QL arcade game with up to 50 locations.'* Available from Dilwyn Jones *Computing* for a trifling £12.50 this TURBOcharged masterpiece will run from disk or cartridge on a basic machine or a fully expanded QL.

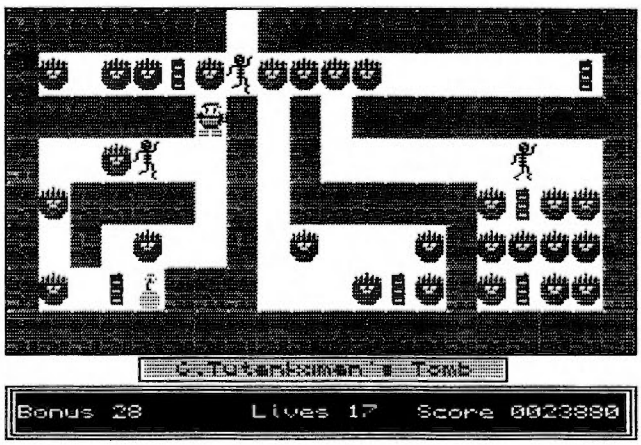
I've read two previous evaluations of this program and both reviewers gave it the thumbs up. I can but add an approving pollex (plus a standing ovation!).

Squidgy can be played either with joystick or with cursor keys. I have the former but use the latter. It is my considered opinion that if God had intended Man to use a joystick He would have given him a flight simulator. I find such equipment cumbersome and unresponsive. However, if an enterprising individual in the mould of Albin 'SERMouse' Hessler were to develop the necessary hardware and/or software to link the QL to a SEGA/Nintendo-style control pad, I'd definitely go for it as the best of all possible worlds. The program can readily be configured to use key presses you prefer if you find the arrow keys awkward.

... but let us get back to the little magenta gent with the red wellies and the Lone Ranger mask. Yes I'm speaking of loveable Mr *Squidgy*, the squeaky midget you must guide and protect on his long and perilous journey through fifty screens of Michael Crowe's unremitting hell...

From the *Scottish Highlands* to the *Australian Outback*, from the innermost cells of the *Human Body* to the furthermost reaches of the *Galaxy*, your little purple friend will be pursued relentlessly by *snakes* and *skeletons*, *one-armed bandits*, *trains* and *lawnmowers*, *sharks* and *Red Indians*, *jellyfish*, *chattering teeth* and the alarming but unspecified *noxious bubbling liquid matter*.

Squidgy works perfectly on my Gold Card/Minerva system but needs a SLUG (SNAIL?) to slow it down. I ran the game simultaneously on two QL's and adjusted the Gold Card version until the speed synchronised with its Trump Card counterpart. Result? SLUG 5! Playing at that speed certainly keeps *Squidgy* on his toes and me on the edge of my seat (does Miracle's molluscous keyword produce a mathematically determinable decrease in speed or does the braking effect vary according to individual hardware configurations?).



When judging *Squidgy* we must bear in mind his real competitors are two Italian plumbers and a hedgehog. Such comparisons may seem unfair but consider the marketplace. My own family is not atypical: nine-year-old son has a Mega Drive; 16+ son has retired after a distinguished career upgrading through a series of games machines. Daughters three and six watch and play too. A rare animal indeed is the kid of today who hasn't used a state-of-the-art games system or seen one in action. Commercially *Squidgy* is no match for SEGA and Nintendo giants like *Sonic* and *Mario Brothers* but exposure to such products has conditioned the console-player of the 90's to have certain expectations of quality in games software regardless of its source.

SQUIDGY ROUND THE WORLD

So how does *Squidgy* fare against such exalted opposition? Well at least we're spared the continual mind-numbing Muzak forced on the ear by *Sonic* and his ilk. *Squidgy's* beeps and burps and bells and whistles are not overly irritating but can be turned off if you find them so. The dazzling graphics which the latest games machines can wring out of a humble colour TV are denied us, but that's a limitation of the QL rather than a fault in Michael Crowe's program.

Besides, the author's fertile imagination and artistic flair more than compensate for deficiencies in QL graphics capability. The game is perfectly playable in amber or green but a colour monitor transforms Kansas to Oz even with the QL's rudimentary paintbox. Sprites are cleverly drawn and animation is simple but effective. My only criticism is that bombs planted throughout the game have fuses that burn with unflickering flames. I'd like to see a few sparks fly in future versions (a word of warning! Ice patches in Lapland have the same effect as the explosives encountered elsewhere).

Screen presentation is neat and attractive. Once the program has loaded the title screen is wiped and a second display shows the top 10 scores to the left, while to the right are four selectable icons which start or quit the game, redefine key presses or scroll through a brief *résumé* of your instructions. The list of achievers automatically updates to disk/cartridge each time a new score qualifies. Be sure your medium is not write protected or you'll get an error message and the game won't run.

Hit <SPACEBAR> and *Squidgy's* in the *Poppy Field*, picking poppies and dodging snakes. Each maze presents *Squidgy* with goodies to collect and nasties to avoid. The basic format persists throughout; only the collectables and predators and the level of difficulty change from screen to screen. Press <\> to pause the game when you feel like a Kit-Kat.

Points are awarded for each object collected and there are other benefits to be claimed along the way: number bonuses (1000, 5000, 10000); time (the faster you go the more you score) and *extra* time bonuses (little clocks); 'limited immortality' (white crosses that *immunise* Squidgy against the next 3-5 assassination attempts); and additional lives ('jumping beans' that don't jump but are yellow and very precious).

There is humour in this game and the ever-changing landscape is pleasingly surreal. My favourite locations are the *Church*, where *Squidgy* has to collect the *prayer books* and avoid the *collection plates* and the *Falklands*, where his task is to round up *penguins* while being pursued by *killer sheep*! One nice little touch is that *Squidgy* dresses appropriately for the occasion and at various times can be seen sporting a straw boater, a construction worker's hard hat, ice skates, scuba-diving equipment and even a space suit.

So, what was the verdict of the experts? How did my children, reared on *Streets of Rage*, *Ecco the Dolphin et al.* assess the merits of *Squidgy Round the World*? The best recommendation I can give is that I've had to intervene frequently to forestall fisticuffs over how long one of them has been hogging the QL and/or about whose turn it is next. Me? I'm an unashamed addict who after much practice and little sleep has achieved a best score of 876,770 and survived as far as level 45 - the Sea (collect the Treasure Chests avoiding the Sharks).

You'll like this one. Buy it now!

Chris Berry

Squidgy can be obtained from DJC (0248) 3540233, 41 Bro Emrys, Tal-Y-Bont, Bangor, Gwynedd, LL57 3YT. It costs £12.50 UK (add £1 for overseas) and can be supplied on disk or microdrive. It will work on an unexpanded QL.

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QMATHS PART 1

Qmaths is a collection of several stand-alone programs written by various authors which will be of interest to the QL mathematician. The programs supplied are: Qmaths (a symbolic algebraic interpreter); Qfract (a fractal design program); a Surface Modeller; and six high precision calculators. There is also a mathematical compendium of various useful SuperBasic routines.

As with most of Digital Precision's (DP's) products, the Qmaths Part 1 package comes with a sizeable manual. Although the manual contains an overall contents list, this only points you to the start of the description for each individual program. Each program is then given its own individual contents list, but unfortunately, this lacks page numbers which can leave you searching for the information you desire.

The supplied disk contains a boot program which will link in the various toolkits used by all of the programs, and then display a menu which allows you to access the main programs (Qmaths, Qfract, the Surface Modeller and the six high precision calculators). I shall start by looking at Qmaths (which oddly enough is given the task name 'flp2_Qmaths'):

Qmaths (v2.10) is really the cream of the programs supplied. It allows you to perform any mathematical operation on your QL, from simple addition to calculus. The program is menu driven (simply press the first letter of the chosen option), and allows you to input an equation and see how this is calculated (if you wish).

Output can be sent to either the screen or both to the screen and a printer. There are four printer drivers included with the program, together with the Basic programs used to create each driver, so that it is relatively simple to adapt an existing driver for use with your printer. The supplied drivers allow for IBM and Epson compatible printers, and if your printer will allow the use of downloaded fonts, then Qmaths can create its output using the correct mathematical symbols.

Pressing 'D' (for Define) produces a line editor for you to enter the expression to be calculated. Although, the QL lacks the means to enter mathematical symbols (eg. the sign for square root), the line editor is very powerful and will allow you quite a bit of freedom in how you enter expressions. For example, *dif(sin(x).2cos(x))* will display the differential of sin(x)*2*cos(x) as will *dif(sin(x)*2*cos(x))* and *dif(sin(x)*2cos(x))*. Having entered the expression, this is stored by Qmaths and allocated an expression number. It will then be shown on screen in the more common mathematical form (unless you tell the program not to display graphics). You can then ask Qmaths to simplify the expression by pressing 'S' (for Simplify), which will then produce the answer: $2.\ [\ cos(x)^2 - sin(x)^2\ ]$

The functions are stored so that they may be retrieved later, for example, pressing 'D' then entering the expression *2*3/6* will show on screen:

#1 user $2.\frac{3}{6}$

If you now select Define and enter #1*4/12 Qmaths will then display on screen:

#2 user $2.\frac{3}{6}.\frac{4}{12}$

(it will actually appear more clearly on screen). Pressing 'S' for Simplify will then calculate the result, and show on screen:

#3 $\frac{1}{3}$

If you enable 'full working', Qmaths will also display each intermediate step as it calculates the result.

Expressions can be as complex or as simple as your heart desires, although Qmaths does suffer from some limitations - only integer arithmetic is allowed and numbers must be in the range -32768 to 32767. Complex numbers can however, also be entered, by using i to represent the square root of -1. You can create variables if you so wish (variables can be given any name up to 7 characters long, using a mixture of letters and numbers (variables must always begin with a letter), although matches are case dependent (a must for many mathematicians). Qmaths supports all of the standard functions required by algebra, and their use is set out clearly in the manual (although some of the functions will not mean very much to the average QL user). Matrices can even be used from within Qmaths, although these are limited to a maximum of 4x4. It is relatively easy to define a matrix - you simply enter the elements within square brackets, using commas to separate each element and semicolons to define the end of a row. For example: *DET([0,1;1,0])* will find the determinant of the square matrix:

(0,1)
(1,0)

As you continue to work using Qmaths, a library of expressions is built up, which you can 'Review' to enable you to search through them to find something which you need to use. Oddly, there is no method of deleting an expression, although the program will delete the earlier ones as the program's memory becomes full (it can handle

over 400 relatively short expressions according to the manual).

Also supplied with Qmaths is a series of lessons which can be loaded into the program as a means of teaching yourself various aspects of mathematics. Although I have not had time to explore this option too much, each example seems to be well thought out and should prove a useful introduction to this program for everyone.

One other option allows you to transform expressions, for example by finding common denominators, translating TAN to SIN/COS; factorisation of expressions and much more. You can even perform logarithmic calculations in any base, or try to 'solve' an expression by rearranging it so that it is expressed by reference to a given variable (for example, *SOLVE(x=SIN(b),b)* will give you the result *b=ASIN(x)*.

Now, let us take an example from my Maths 'A' level - given that $x/(y-1)=^1/_2$ show that $y^2-y=2xy$.

The first thing to do here is to simplify the first expression. I would suggest that you obtain it in terms of y, and then substitute this answer in the second equation. Using Qmaths, this is relatively simple:

Press 'D' to choose 'Define' and enter the expression *SOLVE(x/(y-1)=1/2,y)* and press ENTER. Now, you will need to press 'S' to choose 'Simplify' and Qmaths will then show the expression in terms of y - $y=1+2x$. Now, to show the required result, you need to substitute this in the second equation, by choosing 'Define' and then entering the expression *SUBS(y^2-y,y,1+2x)* - this will swap each occurrence of y with the expression 1+2x. Now 'Simplify' the equation - Qmaths will show the result as a rather peculiar $-1-2.x+(1+2x)^2$. You will now need to press 'T' then 'E' to select Transform and Expand respectively to force Qmaths to calculate this expression fully - Qmaths will now display $2.x+2.x^2$. Now all you need to do is to press 'T' followed by 'F' followed by 'A' to tell Qmaths to try and Factorise the expression as much as possible, and it will display *2.x.(1+2.x)*. Trying to do anything more with Qmaths will just take you around in circles, which is a slight pity. However, you should be able to see that *2.x.(1+2.x)* is the same as *2xy* (see the first result) and hence you have successfully answered the original question.

There are however, one or two minor irritations. Considering that the program is aimed at both the advanced mathematician and someone who is just learning algebra, it is odd to find that the program does not allow you to work in degrees - all angles must be defined in radians (something which is not too easy for the average schoolboy to comprehend). My standard machine is a QL with a Gold Card (a must for the serious user), but unfortunately, the working out and the lessons were all too fleetingly displayed on screen (SLUG had little or no difference) - it might be better to have the option of a single step mode.

Overall the program seems to be an extremely useful addition to the QL repertoire and could certainly prove to be a useful teaching aid (especially with the option of adding further lessons to the program).

The next program offered on the boot menu is Qfract.

Qfract is a fractal generator program (it is not a standard Mandelbrot program), which expects you to enter a series of simple rules in a special language, which will then be used to create a fractal image (for the uninitiated, a fractal image is a picture created using a series of rules over and over again, for example a pseudo tree can be created by the simple rule of drawing a straight line and after a while, splitting it into two, then using this rule to carry on drawing each line - this therefore means that, subject to computing restrictions, fractal images can be magnified indefinitely).

Some earlier versions of Qfract will crash on a Minerva computer, and you will need to upgrade. However, I was a little put off by the fact that the program (v1.07) seems a little temperamental in that it will not multitask (it seems to grab all of the memory) and will sometimes crash on loading, especially if other programs are already running in the background.

When you do persuade the program to load, unlike Qmaths, the menu for the program appears at the bottom of the screen, and you need to press one of the function keys to operate the menu. So that those new to fractals can get used to the program, a large number of ready made Qfract programs are supplied on the distribution disk (they are recognised by the suffix _QFS). You will need to chose F2 (Files) from the main menu, and then F2 to list all of the files which end with _QFS on the default drive (this can be altered with F3). The files are then listed in the bottom half of the screen (why, I wonder, wasn't the full screen used?) and you can highlight your chosen file using the cursor keys and the ENTER key.

Having loaded a program (a script), it will be necessary to

QMATHS PART 1

RUN the script in order to see the picture which is created. You can then EDIT the script if you wish in order to vary the picture produced, although at first glance, fractal scripts can appear extremely complicated and off-putting.

Qfract works by examining an *AXIOM* which appears at the start of a script (normally). This represents a string of characters, each of which should represent a different drawing command used by Qfract. You will then need to define a series of rules, which say how the characters in the Axiom should be manipulated by Qfract, together with confirmation of the number of passes that Qfract should make (ie. how many times the string should be manipulated in the way specified). For example, a very short script would be:

```
^2
*30
"FF--F
>F:P-FFP-
```

This would tell Qfract to make two passes (^2), and set the angles for any turns at 360/30=12 degrees (*30). The Axiom would be set up as the string FF--F ("FF--F) and the rule (>F:P-FFP-) tells Qfract to replace each occurrence of F with 'P-FFP-'. On Qfract's first pass, the Axiom would become P-FFP-P-FFP---P-FFP-, and then on the second pass, the string would become: P-P-FFP-P-FFP-P-P-P-FFP-P-FFP-P---P-P-FFP-P-FFP-P-. Qfract would then proceed to translate these characters into the different drawing commands and produce a picture on screen. As you can see, the Axiom can soon become extremely long (the program can handle an Axiom up to 16mb long!), producing extremely complicated results. However, this does also mean that the program can sometimes seem a little slow.

Quite good results can be achieved using the program, if you are patient, as the drawing commands allow you to change ink and paper colours, screen mode, turn on SuperBasic FILL command, and even to automatically scale the image to ensure that it all fits on the main screen. The script editor itself is quite simplistic, but should be more than adequate for all users needs. One minor irritation is that the only means of saving an image once it has been drawn on screen, is to ensure that the script contains the command DUMP or #Filename - the former dumps the screen to an epson compatible printer and the latter will save the screen to the given filename.

Although this program may be of interest to anyone interested in Fractals, I found it rather difficult to envisage what the results of any given script would be. The manual does however include various lessons in order to assist you in creating your first fractal script and users may slowly find themselves becoming more and more intrigued by the world of fractals.

The third program in the package is the Surface Modeller which needs Toolkit II to be present. Compared to the previous two programs, the user will be surprised to find that the manual only contains three pages on this program, and that when loaded, the user is simply provided with a blank screen and a prompt to enter an expression (users with only a TV will soon notice that they cannot see the whole prompt).

You will need to enter an expression using the variables *x* and *y*, such as x*sin(y). Next, you will need to enter the minima and maxima of *x* and *y*, represented by *x1*, *x2*, *y1* and *y2* (these can either be entered as simple numbers or expressions), the number of intervals to be shown, the angles theta and phi (which are used to calculate the viewing angle) and a number representing one of three scaling modes. There are even nine different ways that the program can draw the resultant surface, and it is relatively simple to change this once the image has been drawn, by simply pressing F5 and entering the relevant value. Similarly, other values can be amended without having to alter unnecessary values.

Some users will be surprised that the prompts appear in Spanish (presumably the origin of the program). Although the manual states that this is to avoid 'linguism', it seems non-sensical where the rest of the package is written in English.

This is a small interesting program, which allows you to view various mathematical surfaces in three dimensions. However, there are plenty of similar programs in the public domain.

Most mathematicians will be appalled by the lack of precision offered on the QL (and most other computers), which only supports 8-9 digits (rounding errors become apparent with Easel for example). They will therefore be delighted to note that the package contains six high precision calculators (offering 14, 33, 72, 149, 303 and 611 digit accuracy). All of the calculators use the same user interface, and expect input to be entered in reverse polish notation (like the FORTH language). Although this can take a little getting used to (for example, 4*3 is entered as 4 3 *), this should not put users off.

These calculators can handle a wide range of mathematical functions, and even allow you to set up files containing lists of calculations to be used later, I would have liked a description in the manual of how to use the routines

QMATHS PART 1

supported by the calculators from within your own programs (both in basic and in machine code), possibly by using pipes to pass expressions to the calculator to be calculated and returned to the calling program (to some extent, this is where Qmaths 2 comes in).

Finally, the package contains a compendium of 42 different SuperBasic programs which may prove of some use to a wide range of users. The manual explains that the programs have been kept as simple as possible so that they can be used in a wide range of BASIC dialects, including Archive programs. The routines included allow you to find binomial coefficients, display factors of any number, perform different types of sorts, multiply, add and subtract matrices, and much more.

Overall, I believe that users may feel a little disappointed with the Qmaths package, in that the majority of routines and programs supplied can already be found in most public domain and the Quanta library. However, the Qmaths program and high precision calculators are certainly a useful addition to the QL's repertoire.

Although the package is well thought out, the fact that there are so many routines by different authors has resulted in a lack of a common user interface which can lead to confusion and problems when using the package. I also feel that the price is likely to put off all but the serious mathematicians (how many are there using a QL I wonder?), and yet with the teaching abilities of both Qmaths and Qfract, I would rather that this package be aimed at a wider audience.

The problems with multitasking various parts of the package, and the fact that the file QLVAL_EXTS destroys the Toolkit II default devices, seems somewhat odd for a package from a longstanding QL software supplier, with an excellent reputation.

Rich Mellor

QMATHS MATHEMATICAL SYSTEM PART ONE costs £69.95 and can be obtained from Digital Precision (081) 527 5493, 222 The Avenue, London, E4 9SE. It needs at least 512K of expanded memory and is only supplied on disk.

HELP DESK

Q: How do I tell which version of QPAC2 I am using ?

One of quickest ways is to type in the Toolkit 2 command VIEW FLP1_QPAC2. This will show a screen of the file itself displaying the version number of QPAC2 (such as version 1.33, one of the latest releases) and below it will be the version numbers of all the things that make up QPAC2. Pressing CTRL and SPACE together will stop it from displaying any more of the file.

Another way is to use QPAC2 itself by utilising the File maintenance program. If you start the File maintenance program and press PF4, the view option, and then press Enter on the QPAC2 file entry the version numbers will be displayed in a window on the screen. Pressing ESC will bring the main files window back. Upgrades can be obtained from Dilwyn Jones Computing priced £5 for the UK or £6 for overseas.

Q: Why do many commercial programs have two boot files one loading straight after the other ?

This is because of problems with the JM ROM. The normal sequence of events in a boot program is to load any extensions the program needs first using LRESPR (for Toolkit 2 users) or RESPR commands and then execute the program. Such as :-

```
10 LRESPR FLP1_XTRAS
20 EXEC MY_PROGRAM
```

This will work on a JS ROM but will fail on a JM ROM. The reason it fails is that program will be unable to see the extensions and therefore does not work. To overcome this problem, and avoid numerous phone calls, publishers place the commands in two boot programs :-

```
(BOOT)
10 LRESPR FLP1_XTRAS
20 LRUN BOOT2
(BOOT2)
10 EXEC MY_PROGRAM
```

Loading the extensions this way means MY_PROGRAM is able to see and utilise the extensions and so the program works.

[If you are in need of Help, either software or hardware related, then send in the details to HELP DESK at the same address as Quo Vadis Design. All the questions we print in the magazine will have the solution or answer in the same issue.]

FUNCTIONALITY

This listing is part of a set of useful procedures and functions which you can use in your library. They are suitable for use with the Procedure Manager program *[listing supplied in QReview Volume 1 Issue 2]* . Simply extract the routines you want to use in your programs and renumber as you want them. All are in structured BASIC, so there should be no problem with line numbers in GO TO statements etc.

The following notes give brief details of what each routine does. They are supplemented by REMark statements in the routines themselves.

YN$

This is a simple Yes/No response function. It merely waits until the user presses the Y or N keys. It returns an upper case Y or N, so you can use it in IF ... THEN statements to make decisions based on user responses, e.g. IF YN$='Y' THEN. If compiling the routine, you should ensure the cursor is active in the channel used (in this case, the default of channel 0) by putting a cursor on statement just before the INKEY$ statement and a cursor off after it, which will help to ensure that your program works with the EXEC command.

UPPER$

A string function to convert a given string to upper case. For example, call it with PRINT UPPER$('test')

```
1000 REMark programmed routines library
1010 :
1020 REMark Simple Yes/No selection
1030 REMark returns Y for yes or N for no
1040 DEFine FuNction YN$
1050   LOCal loop,k$(2)
1060   REPeat loop
1070     k$ = INKEY$(-1)
1080     IF k$ = 'y' : k$ = 'Y'
1090     IF k$ = 'n' : k$ = 'N'
1100     IF k$ = 'Y' OR k$ = 'N' : EXIT loop
1110   END REPeat loop
1120   RETurn k$
1130 END DEFine YN$
1140 :
1150 REMark convert string to upper case
1160 DEFine FuNction UPPER$ (lc$)
1170   LOCal a,u$,cde
1180   u$ = lc$
1190   FOR a = 1 TO LEN(u$)
1200     cde = CODE(u$(a))
1210     IF cde > 96 AND cde < 123 THEN u$(a) = CHR$(cde-32)
1220   END FOR a
1230   RETurn u$
1240 END DEFine UPPER$
1250 :
1260 DEFine FuNction LOWER$ (uc$)
1270   LOCal a,u$,cde
1280   u$ = uc$
1290   FOR a = 1 TO LEN(u$)
1300     cde = CODE(u$(a))
1310     IF cde > 64 AND cde < 91 THEN u$(a) = CHR$(cde+32)
1320   END FOR a
1330   RETurn u$
1340 END DEFine LOWER$
1350 :
1360 REMark convert string to mixed case (start with upper case letter,
1370 REMark remainder in lower case, e.g. names)
1380 DEFine FuNction MIXED$(uc$)
1390   LOCal a,u$,cde
1400   u$ = uc$
1410   IF LEN(u$) > 1 THEN
1420     cde = CODE(u$)
1430     IF cde > 96 AND cde < 123 THEN
1440       u$(1) = CHR$(cde-32)
1450     END IF
1460     FOR a = 2 TO LEN(u$)
1470       cde = CODE(u$(a))
1480       IF cde > 64 AND cde < 91 THEN
1490         u$(a) = CHR$(cde+32)
1500       END IF
1510     END FOR a
1520   END IF
1530   RETurn u$
1540 END DEFine MIXED$
```

LOWER$

A string function to convert a given string to lower case. For example, call it with LET a$=LOWER$('TEST')

MIXED$

A string function to convert a given string to mixed case, in other words, the first letter becomes upper case while the subsequent characters become lower case. This routine is useful to ensure that names, for example, look right. Call with a line such as LET a$=MIXED$('NAME') which will convert 'NAME' to 'Name'

MULTI_BORDER

A procedure which shows how to generate multi-coloured borders around windows.

SAFER_INPUT

A routine to improve error trapping when entering numbers. This function traps most common errors such as entering a letter when a number is expected. Notice how '0'& is used to help protect the input. It is not infallible - two lines protect against entering two decimal points and a double 'e' for large numbers.

BUBBLE_SORT

A procedure which demonstrates a bubble sort routine. This is not one of the most advanced of sorting routines, but it is short, simple and reasonably

```
1550 :
1560 REMark multi-coloured border, using transparent colour
1570 REMark in given channel number
1580 DEFine PROCedure MULTI_BORDER (channel,size)
1590   LOCal a
1600   FOR a = size TO 1 STEP -1
1610     BORDER #channel,a,RND(0 TO 255)
1620   END FOR a
1630   REMark transparent new border, no colour makes it
1640   REMark transparent, could also use colour 128
1650   BORDER #channel,size,128
1660 END DEFine MULTI_BORDER
1670 :
1680 REMark slightly safer method of entering numbers
1690 REMark protects against most errors
1700 DEFine FuNction SAFER_INPUT
1710   LOCal get_number,num$,number
1720   REPeat get_number
1730     INPUT'Enter number:';num$
1740     IF '..' INSTR num$ : NEXT get_number
1750     IF 'EE' INSTR num$ : NEXT get_number
1760     number = '0' & num$
1770     IF number = 0 AND num$<>FILL$('0',LEN(num$)) THEN
1780       NEXT get_number : REMark oops
1790     ELSE
1800       EXIT get_number : REMark OK
1810     END IF
1820   END REPeat get_number
1830   RETurn number
1840 END DEFine SAFER_INPUT
1850 :
1860 REMark bubble sort a numeric array
1870 DEFine PROCedure BUBBLE_SORT (array)
1880   LOCal ptr1,ptr2,swap
1890   FOR ptr1 = 1 TO DIMN(array)
1900     FOR ptr2 = 0 TO ptr1
1910       IF array(ptr1) < array(ptr2) THEN
1920         swap = array(ptr1)
1930         array(ptr1) = array(ptr2)
1940         array(ptr2) = swap
1950       END IF
1960     END FOR ptr2
1970   END FOR ptr1
1980 END DEFine BUBBLE_SORT
1990 :
2000 REMark slightly faster insertion sort
2010 DEFine PROCedure INSERTION_SORT (array)
2020   LOCal length,ptr1,largest,indx,location,swap
2030   length = DIMN(array)
2040   FOR ptr1 = 0 TO length-1
2050     largest = array(ptr1)
2060     FOR indx = ptr1 + 1 TO length
2070       IF largest > array(indx) THEN
2080         largest = array(indx)
2090         location = indx
```

good with small arrays. The array to be sorted is passed to the routine as a parameter and is returned that way, so reference parameter passing is required. It is set up for numeric arrays - the main change required for strings is to change the variable 'swap' to a string variable.

INSERTION_SORT

Another type of sorting routine, slightly better in most respects than the bubble sort routine, although longer. Again, written for numeric arrays.

QUICKSORT

A fairly advanced routine which is quite good at sorting large arrays. This routine is recursive - it conditionally calls itself and so uses quite a lot of memory to store return details, although the efficient handling of large arrays more than makes up for this. Again, written for numeric arrays.

RESET_EPSONS

A handy little routine for resetting Epson compatible printers by sending the ESC "@" reset code.

FORMFEED

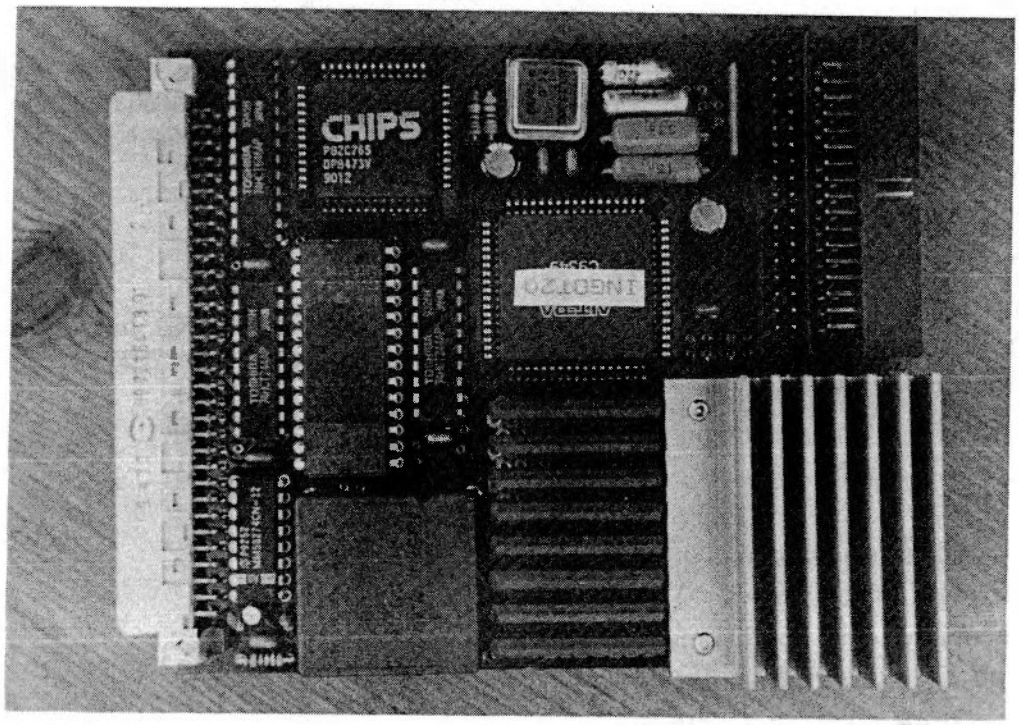
A handy little routine to feed a page forward on a printer. If your word processor leaves the paper where it finished printing, go to basic and type 'formfeed' to eject the page.

Dilwyn Jones

```
2100      END IF
2110    END FOR indx
2120    swap = array(ptr1)
2130    array(ptr1) = array(location)
2140    array(location) = swap
2150  END FOR ptr1
2160 END DEFine INSERTION_SORT
2170 :
2180 REMark the Quicksort algorithm, good for large arrays
2190 REMark call with array name,0,DIMN(array_name)
2200 DEFine PROCedure QUICKSORT (array,bottom,top)
2210  LOCal sort_loop,low,high,ptr
2220  low  = bottom
2230  high = top
2240  ptr  = bottom
2250  REPeat sort_loop
2260    IF low >= high THEN EXIT sort_loop
2270    IF array(low) > array(high) THEN
2280      swap         = array(low)
2290      array(low)   = array(high)
2300      array(high)  = swap
2310      IF ptr = low THEN
2320        low = low + 1
2330        ptr = high
2340      ELSE
2350        high = high - 1
2360        ptr  = low
2370      END IF
2380    ELSE
2390      IF ptr = low THEN
2400        high = high - 1
2410      ELSE
2420        low = low + 1
2430      END IF
2440    END IF
2450  END REPeat sort_loop
2460  IF ABS(top - bottom) < 2 THEN RETurn
2470  QUICKSORT array,bottom,ptr - 1
2480  QUICKSORT array,ptr + 1,top
2490 END DEFine QUICKSORT
2500 :
2510 REMark a routine to reset a printer
2520 DEFine PROCedure RESET_EPSONS
2530  OPEN #3,ser1
2540  PRINT #3,CHR$(27);CHR$(64);
2550  CLOSE #3
2560 END DEFine RESET_EPSONS
2570 :
2580 REMark send formfeed to printer
2590 DEFine PROCedure FORMFEED
2600  OPEN #3,ser1
2610  PRINT #3,CHR$(12);
2620  CLOSE #3
2630 END DEFine FORMFEED
```

MIRACLE SYSTEMS

SUPER GOLD CARD



Briefly...

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GOLD CARD	£ 150
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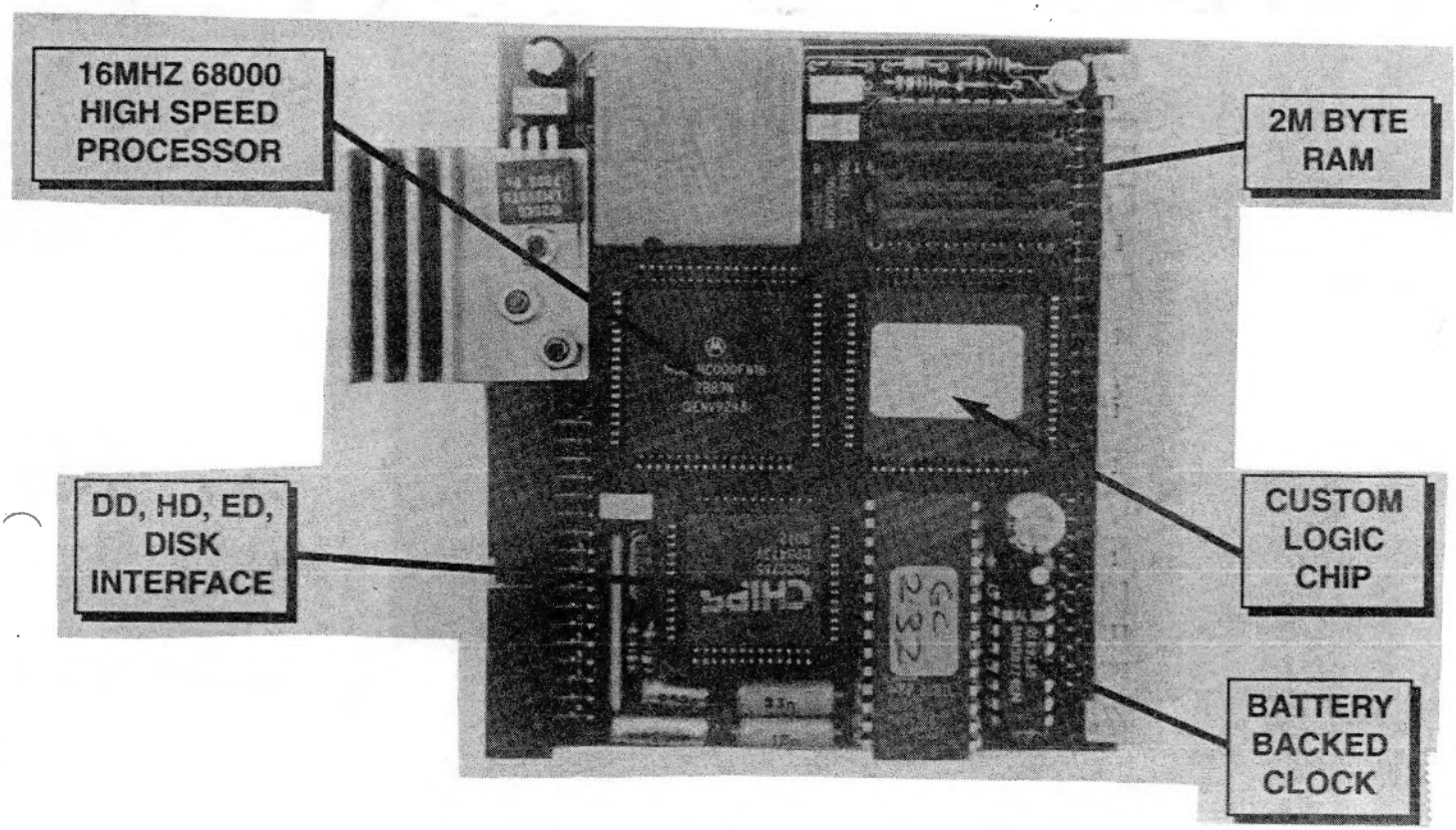
Recycled items carry a 1 year warranty.

MIRACLE SYSTEMS



QL GOLD CARD

£225 inc. (£200 outside EC)

This is the expansion that has been revolutionising the QL. It is very easy to fit , it simply plugs into the expansion port at the left hand of the QL, and once fitted it will instantly increase the execution speed of the QL by about 4 times due to the presence of a 16MHz 68000 on board. There is 2M of fast 16 bit RAM of which QDOS sees a contiguous 1920K. The remainder is used for shadowing the QL's ROM and display memory and for the GOLD CARD's own code.

There is a disk interface which can access 3 mechanisms (4 with the DISK ADAPTER) of three different densities, DD (double density, 720K), HD (high density, 1.44M) and ED (extra high density, 3.2M) in any mix. The disk interface connector is the same type that was fitted to the Trump Card so most QL compatible disk drives can be used.

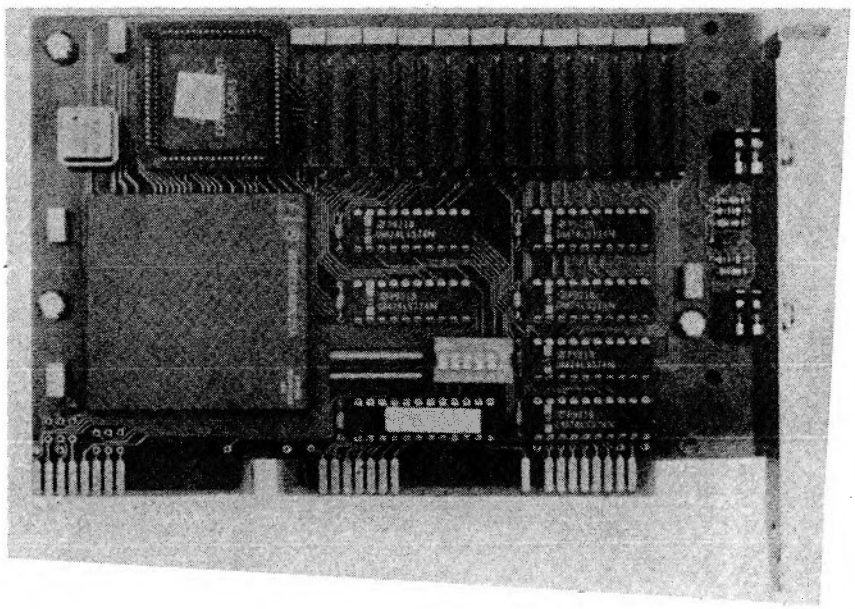
> Please note: that DD drives still give a capacity of 720K per diskette.
> Our DUAL ED DISK DRIVE allows the GOLD CARD to access DD, HD and ED diskettes.

Another feature is the battery backed clock. When the QL is switched on the contents of the clock are copied into the QL's clock so that the time and date are correct. The firmware in the ROM gives the GOLD CARD all the functionality of the Trump Card like TOOLKIT II and there is a sub-directory system for floppy and RAM disks.

Physically the GOLD CARD is about half the size of the TRUMP CARD and so fits almost all within the QL. Its current consumption is well under allowable maximum so no special power supply is required. The GOLD CARD comes with a 14 day money back guarantee and a 2 year warranty.

MIRACLE SYSTEMS

THE QXL



The QXL turns the common PC into a QL compatible. The package comprises a half card that plugs into an 8 or 16 bit standard ISA slot and a diskette loaded with a QDOS compatible operating system and a SuperBasic compatible interpreter. After installation simply type QXL and the PC will appear to be a QL allowing QL programs to be run from QL format diskettes.

The card itself has a 32 bit 68EC040 processor running at 20MHz which gives a good turn of speed. This processor has access to its own RAM and so performance is virtually independent of the host PC whether it has an 8088 or a Pentium. In fact the PC is used purely as an I/O system giving QL programs access to the PC's floppy disk, hard disk, keyboard, display, serial and parallel ports. The card has QL style network ports to allow connection to a QL network. The minimum PC specification required is an XT with EGA display and a spare standard slot.

Varying RAM sizes from 1M up to 8M can be supplied. The smaller capacities can be upgraded to the larger ones and the cost is simply the price difference. Not all the RAM is available to the user programs; the 1M equates roughlybwith a Trump Card QL memory size and the 2M with a Gold Card QL.

During the lifetime of the QXL we intend to enhance the software to make use of the new hardware facilities of the PC such as SVGA graphics. As has been our policy in the past we intend to provide software upgrades free of charge.

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Tel: (0904) 423986

QXL prices

1M	£295	(£255)
2M	£325	(£280)
5M	£410	(£355)
8M	£495	(£430)

VISA MASTERCARD

DBPROGS

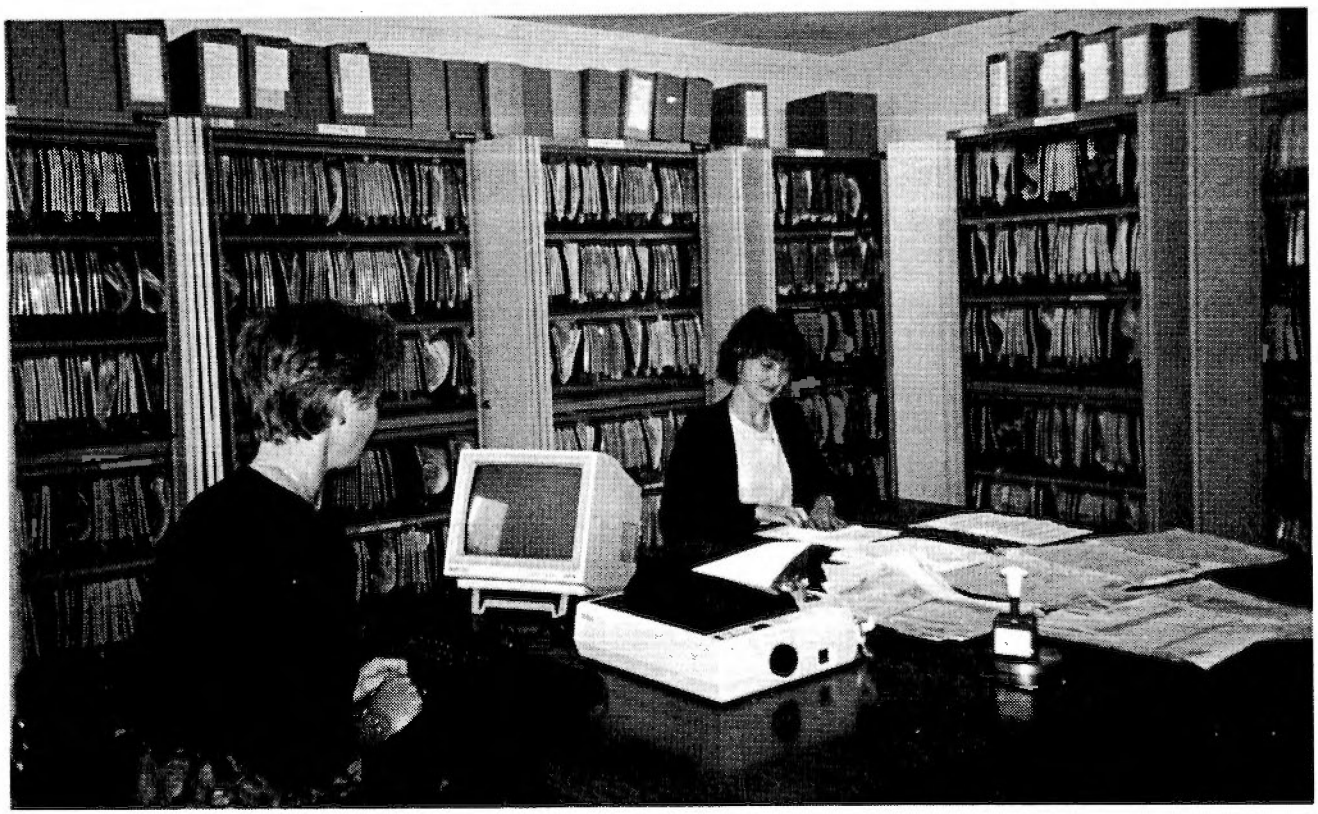
This suite of programs might well have been called "An Archive Toolkit" as its American author, Bill Cable, suggests. There are in all, seven sets of generalised "stand-alone" procedures which, after loading, will painlessly carry out their respective functions on virtually any Archive file. Even if you are an experienced Archive user, some (if not all) of these utilities may well save you much time and effort in manipulating your database files.

Four introductory Quill files are provided. Three of these are reprints of articles which not only extol the virtues of Archive as a database, but in conjunction with the QL User Guide's "gazet_dbf" example, provide many useful hints and tips. If after acquiring a QL with the bundled Psion software you shied clear of Archive, perhaps because of its programming language, then these explanatory Quill documents might well have been written with you in mind. The fourth Quill file is actually a 23 page DBProg Manual which describes in great detail the content and use of the seven utilities.

The author's meticulous style extends not only to the programs' on-line help, but to the faultless performance of the toolkit components. If the unsophisticated menu layouts sometimes leave a little to be desired, the same cannot be said about the operation of the procedures themselves. They all work exceedingly well. The only thing I found which needed a little care was when responding to "select" or "order" requests. Otherwise processing is more or less automatic and largely a case of "y/n" followed by <ENTER>.

The first utility, "DR_prg", is a Directory program the object of which is to enable the usual file housekeeping to be performed from within Archive. It needs no explanation and is probably of most value to owners of unexpanded QLs where limited memory precludes multitasking.

As the other six programs turned out to be generalised procedures of some routines I employed when networking Archive on QLs for a local company, I decided for the purposes of this review, to test them on one of the firm's databases *[See picture below]* (DBProgs are designed partly for small business applications). I chose a reasonably sized file, - about 240K containing some 4,254 records each containing 7 fields.



"*scan_prg*" is a straightforward means of selecting any three fields in an Archive file and displaying them as consecutive records on the screen with an option to output additionally to a printer. If a numeric field is chosen, you are asked to specify the required number of decimal places, and the sum total of all the field records is printed on completion.

"*freq_prg*" neatly scrolls down any selected field from a database file indicating the number of times information is repeated and allowing inspection of the content. As well as a print-out, there is an option to create an export file enabling transfer of information to Abacus and/or Easel.

"*split_prg*" will, as the name implies, split any database into two new ones. Using Miracle Systems' Gold Card, it took just under twenty minutes to order and select "A to L" and "M to Z" from the complete customer files mentioned above.

"*join_prg*" was used similarly to rejoin the two new database files.

"*replace_prg*" provides a facility to replace text in any fields of an Archive database easily and repeatedly in much the same way as search and replace in a word processor. Any ordering which exists is first removed, following which there are options to replace or not replace, vary the method or speed of displaying and continue with or alter the method previously selected.

"*REFIELD*" this utility operates rather differently from the others in as much as it comprises a series of seven programs viz., - "*step1_prg*" to "*step7_prg*", all of which follow automatically in sequence after "*step1_prg*" has been started and the various procedures implemented (The reason for this is to accommodate unexpanded machines).

REFIELD is, without doubt, the most comprehensive and useful program in the whole suite. It will in general add, move, remove, rename, re-order and/or redefine the fields in a database much less tediously, and usually more quickly, than normally accepted methods. (A database could also be divided with the aid of its "*select*" option, but not as conveniently as by using "*split_prg*".)

The various functions which performs are, as with the other programs, greatly speeded up when using ram disc. An ideal route to take is to have the DBProgs disc in an flp_ drive, and the source database in ram1_. The program's temporary files can then be directed into ram2_, and output files split as necessary between ram2_ and ram3_. This method also ensures that in the event of some disaster occurring, your original data is neither corrupted or worse still lost. As the author has put so much effort into preventing catastrophes however, one can feel reasonably confident that, mains or hardware failure apart, this is extremely unlikely. Files are as far as possible merely "look"-ed at, and when it is necessary to "open", the program will always "close" on completion of the operation.

The number of fields which the program can handle is limited to 32, - more than enough for most QL users. As a matter of interest I tried REFIELD out on an Archive program development template containing 100 fields, only to be given an "out of range" error message (As one would expect!). Error handling is in fact very good. Relevant suggestions, additional to the help file, come up on the screen when an inappropriate menu response has been entered.

By way of a bonus, DBProgs includes a natty little offering written in SuperBasic and titled "Arithmetic Drill". If your mental arithmetic skills are not what they used to be, this program should sharpen them up!

Jim Buik

DBProgs costs £15.00 in the UK or £16.00 for overseas and can be obtained fron Dilwyn Jones Computing (0248) 354023, 41 Bro Emrys, Tal-Y-Bont, Bangor, Gwynedd, LL57 3YT. It is supplied on disk only.

When returning a result from a function there are certain things you need to keep in mind, according to the manual, books etc. These things are :

1) Tidy the stack and leave only enough room for your result.
2) Store A1.L in BV_RIP(A6) just before returning.
3) Set D4.W to the appropriate value for the result you are returning.
4) Clear D0.L and RTS to SuperBasic.

There are four ways that your function could finish up :

1) There were no parameters.
2) There were parameters which used MORE space than the result uses.
3) The parameters used the SAME space as the result.
4) The parameters used LESS space than the result.

The first can (and did) cause problems. As no maths stack space has been used for parameters, you need to request some by calling th BV_CHRIX vector routine with the amount of space required in D1.L. So to return a long word you must first convert it to a floating point value, reserve 6 bytes on the maths stack and so on.

If your function code used the A1 register, you will have preserved it and kept its original value at entry, but remember this is a useless maths stack pointer. The DJToolkit routine SYSTEM_VARIABLES returns the address of where the system variables live in the QL and has no parameters. When I first wrote it I stored A1 in BV_RIP(A6), requested 6 bytes for my result and the whole QL hung up !

When QMON 2 was used to trace this fault, I discovered the problems with A1's initial values. The solution is NOT to store A1 in BV_RIP(A6) if there was no usage of the maths stack for parameters. The correct method of operation is :

```
MOVEQ     #nn,D1          Request 'nn' bytes for
                          stack space
MOVE.W    BV_CHRIX,A2     Get the vector
JSR       (A2)            Get stack space
MOVE.L    BV_RIP(A6),A1   Get a proper stack
                          pointer
SUBA.L    #nn,A1          Make room for the result
MOVE.L    A1,BV_RIP(A6)   Save the new top of stack
etc                       Rest of code goes here
```

As you can see, A1 is NOT stored prior to BV_CHRIX, this will always work and there will be no problems with the function failing.

For the next possibility, the parameters fetched at the start of the function have used more space than the result requires. What needs to be done here can be quite complicated if the stack has not been tidied as you went along. Strings as parameters can cause major headaches as a single parameter string can use a minimum of 2 bytes of stack space if the string is empty (not space filled) or can use up to 32K of stack space plus 2 bytes, all in all, quite a range of values.

You must add 4 bytes to A1.L for every long word parameter fetched, 2 bytes for every word parameter fetched, 6 bytes for every floating point parameter fetched and as detailed above for string parameters. Once this is done, A1 should point at the top of a tidy stack. Now subtract from A1.L the amount of space your result requires. This new value must be stored in BV_RIP(A6) before you RTS to SuperBasic otherwise the stack will not be properly tidied and you could and up with another crash.

A small example, with 2 longs and a float as parameters and a result of an integer follows :

```
ADDA.L    #10,A1          Tidy parameters off stack
SUBQ.L    #2,A1           Make room for result
MOVE.L    A1,BV_RIP(A6)   Save new top of stack
etc                       Rest of your code goes
                          here
```

Once again, all is well. The next example considers what you need to do when the space used by your parameters is equal to the space required for the result. This has to be the easiest. When you retrieve your parameter(s) off the stack, don't tidy it. When you come to return the result, A1.L will be all ready for the result. As follows :

```
MYFUNC    get_params etc
          MOVE.W          0(A6,A1.L)),D1
          Get the word parameter
          do something with parameter
          MOVE.W          D2,0(A6,A1.L)
          Move the result to the stack
          MOVE.L          A1,BV_RIP(A6)
          Save the (new) top of stack
          etc             Rest of the code
```

The above example assumes one integer parameter and an integer result. The stack will always have room for the result as the parameter fetch routines made room for the parameter and it uses the same space. Easy.

The fourth and final scenario is also the most difficult, that is why I saved it until last. Our parameters have used up

less space on the stack than we need for the result. What do we do ?

First of all, calculate how much extra space is required and request this much extra stack from BV_CHRIX, adjust A1, stack the result and so on.

What you must NEVER do is ask BV_CHRIX for the full amount of space required by the result, only the extra. If you do, your stack will wander down through the QL's memory every time your function is called until the QL gives up and falls over (again ?). In addition, the results of your function will not always be correct depending upon whether it is called as part of a more complicated expression and also upon the rubbish that is on the 'extra' bit of stack that your function created.

Once again, an example will help to explain. Assume a string result is required which we have calculated is longer than our parameter which in this case is a long word integer of 4 bytes. Let us assume that our string is going to be 100 bytes long.

```
MYFUNCT     MOVE.W      CA_GTLINT,A2
            Fetch our long word parameter
            JSR         (A2)
            MOVE.L      0(A6,A1.L),D0
            Get it off the stack
            ADDQ.L      #4,A1
            Tidy the stack
            do something with the parameter etc.
            MOVE.L      A1,BV_RIP(A6)
            Save the current stack top
            MOVEQ       #102,D1
            Data size plus word for length
            MOVE.W      BV_CHRIX,A2
            Reserve stack space
            JSR         (A2)
            Do it
            MOVE.L      BV_RIP(A6),A1
            Get new stack top
            SUBA.L      #102,A1
            Make room for our result
            MOVE.L      A1,BV_RIP(A6)
            Save the new stack top again
            etc
            Rest of the code goes here
```

In this rather simplistic example, we know that our string result is going to be an even length. In practice, it is best to check the length to make sure it is even and if not, add an extra byte to the value in D1.L when we call BV_CHRIX, don't forget to always add 2 bytes for the size word.

I have shown in the above example, the original parameter being tidied off of the maths stack by the instruction ADDQ.L #4,A1. It does not matter whether you do this or not, QDOS and BV_CHRIX processing can handle it. The value in A1 should, however, be stored in BV_RIP(A6) whether it is the tidy stack pointer or not.

When writing functions, it is always best to return an error code in the event that it goes wrong. I find it quite annoying when a function only returns a result if everything went well and simply 'falls over' with a QDOS error code when soemthing goes wrong. This behaviour is ok in a procedure as this is the way that they work and errors cannot be returned any other way. In a function it is bad news. I think that many functions are written this way because in the event of an error code being in D0 when the function returns to SuperBasic, QDOS takes over and in a manner similar to that used for procedures, handles all the stack tidying etc and the programmer has very little to do.

It is, of course, perfectly valid to write functions that do this, however, functions should return either a proper result or an error code. I have written DJToolkit in such a way that it is only possible for a function to fail and cause an error code to 'crash' SuperBasic if something goes wrong during the parameter fetch routines. In this case it is quite difficult to figure out what is on the stack or not, so tidying it up prior to returning the error code is impossible (unless you know different ?) and all that can be done is to leave the error code in D0.L and RTS back to SuperBasic. It is of course not possible for a function that returns a string result to return an error code.

In all other failures, the error code is stacked and returned as the result of the function. This involves quite a bit of code in each function to ensure that the stack is kept tidy and that there is room for the result, it does mean that programs calling these functions can carry on after an error and perhaps do something to inform the user. If you are trying to find out the length of a file on a disc, for example, would you prefer to have a -7 error code returned (not found) if you typed the name wrongly or would you prefer SuperBasic to stop with a 'not found' error code ? Programs should check for error codes, inform the user and allow another try etc. Much more friendly.

In summary, the maths stack is a very important part of function writing, it needs to be looked after and kept tidy. Never make it odd. Never ask for an odd number of bytes from BV_CHRIX. Look after it and it will look after your functions.

Norman Dunbar

FIVE GAME PACK

Written by Wreford Davies and distributed by Dilwyn Jones Computing, this suite of games can be yours for £12.50. A price tag of £2.50 per game seems no bad deal given the ingenuity of the author in designing the package and the care and attention he has devoted to writing the programs.

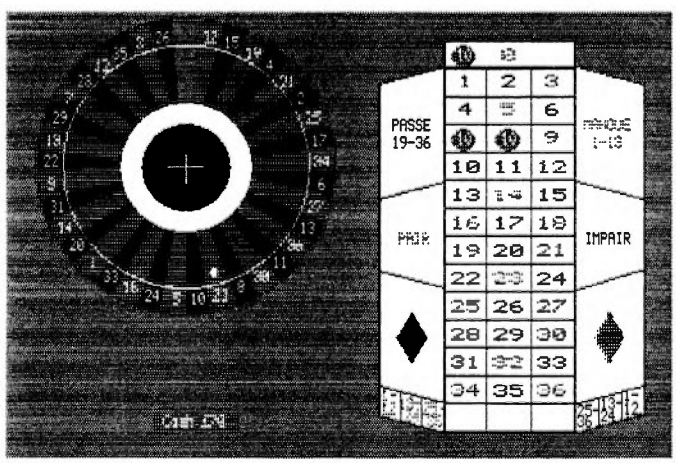
Five Game Pack came highly recommended by John Shaw who "thoroughly enjoyed playing each and every game" in his QL World review of February 1992. Having tried 5GP for myself, my comments are likely to be somewhat less effusive. So rather than damn a commendable product with faint praise, I shall be handing out brickbats as well as bouquets.

The games, in random alphabetical order, are...

ROULETTE

"The scent and smoke and sweat of a casino are nauseating at three in the morning. Then the soul-erosion produced by high gambling - a compost of greed and fear and nervous tension - becomes unbearable and the senses awake and revolt from it."

Thus begins the career of the world's most famous spy. Ian



Fleming's Casino Royale racily describes for us the world of high stakes with all its risk and excitement and decadent opulence. I'm no gambler myself (I have other vices!) but for me roulette means Monte Carlo, Las Vegas, damp palms, shortness of breath and a fast heartbeat. You can't put that all that into a home micro, not even a QL!

Roulette is a clever piece of programming but I'm afraid the game sent no shivers down my spine. The layout is attractive and uncluttered with its four-colour mode display of the wheel and playing surface. <F3> gets you a page of HELP with a clearly labelled diagram and easy-to-follow instructions on how to place bets as well as a table of odds and an explanation of French terms used in the game. <F1> pops up a third page with spin-by-spin statistics of the current gambling session. When *les jeux sont faits*, you hit <F5> to activate the wheel and send the little white marble rattling around in ever-decreasing circles until it comes to rest and you're told how much you've won or lost.

The first couple of times you witness this graphic demonstration its a gas but after a few spins the spectacle of a white spot bleeping round and round in a decelerating involute curve becomes irritating and unbearably tedious.

Sitting at home alone in front of a VDU, I found my imagination hard pressed to conjure up the atmosphere and tension so much a part of this game in its natural habitat. The element of risk (surely what gambling is all about!) is totally absent. The money you play with is not your own and losing it means nothing.

Roulette starts you off with a paltry hundred quid kitty. When you consider Bond and Le Chiffre played for *un banco de trente-deux millions*, this is small beer indeed.

MINDBENDER

This one is based on a game called *Mastermind* (not to be confused with the popular TV series hosted by that erudite Viking Magnus Magnusson) that was invented back in the seventies by Invicta Games. It was voted Game of the Year (by a panel of experts no doubt!).

It works like this. The computer generates a random code of many colours and your mission, should you decide to accept it, is to crack the cypher by a process of trial and error, guesswork, logic, deduction and elimination. Each time you enter a combination the computer reports how many of your chosen colours are correct and of these how many are in the right position. If you duplicate the mystery colour scheme in eight you're a winner!

This game travels extremely well from plastic pegboard to computer screen *if* you have a colour monitor. Green/amber-only users are going to struggle because mode 8 colours are so difficult to distinguish in

monochrome. Optional use of contrasting stipples would be helpful to these people.

The original board-game was four squares wide by ten squares long with up to six colours. Wreford Davies gives you five rows by eight columns with a maximum of eight colours. This makes the QL version considerably more difficult! An option to play with a four by ten grid would make the QL version more enjoyable and encouraging for children and beginners. It's tough to crack the code in eight goes, especially using the full QL palette.

Mindbender's display is neat and attractive. A key in the form of a numbered muti-coloured strip helps with entering your selections. Once you have painted the five rectangles you can <ENTER> your choice if you're satisfied or <SPACE> to start over if you're not. A minor irritant is that there is no <ESC>ape from this program until you've made eight guesses or won the game in fewer. In my view all computer games should provide a facility to abort at any time.

Pedantry and nit-picking aside, I confess I like *Mindbender* and my enjoyment increases the more I play it. For such a simple game it certainly gives the little grey cells a thorough work-out.

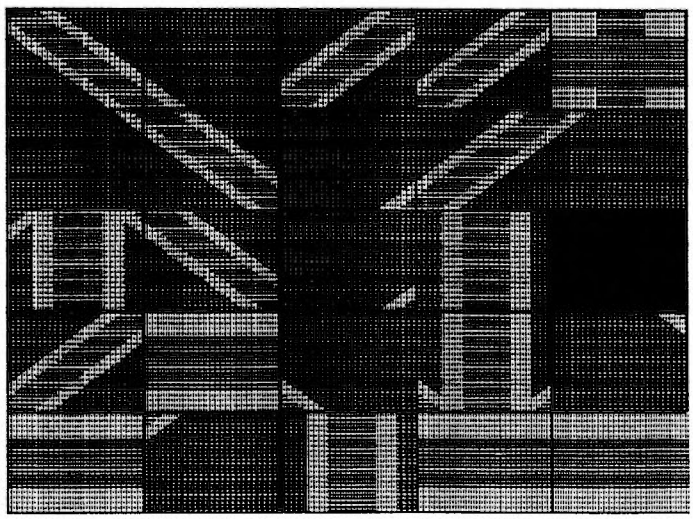
FLAG PUZZLE

My immediate reaction to this vexillological brain-teaser was that of all *5GP's* offerings it promised to adapt best to life as a computer game. You probably found a plastic prototype of this puzzle in your Christmas stocking when you were a kid - a grid of sliding square tiles in a rectangular frame. Each tile had a letter or a small part of a big picture. One square was always missing so adjacent tiles could slide into the empty space. This way a jumbled pattern could with time and patience be rearranged either to spell words or to complete a design. A simple but ingenious idea. These days such toys emanate from fast food outlets as *Happy Meal* freebies.

Wreford has made a good job of porting this game to the QL. The cursor keys allow you to manipulate the display smoothly and quickly - no problems with wedged tiles or little plastic flanges snapping off! Select one of three national flags then one of ten levels of difficulty and away you go. If you get stuck, hitting <H> gives you help (tells you which key to press next) and <R> (retrace) solves the puzzle for you a move at a time. When you've finished the jigsaw the program very kindly fills in the missing square for you.

But soon one encounters a snag with this digitised conundrum which provokes first a raised eyebrow of surprise then a frown of mild annoyance and finally a paroxysm of blue-faced ire (perhaps I am taking this game a little too seriously!). The snag is this...

Each of the three flags is composed of twenty five rectangles which are shuffled by the computer and must be correctly rearranged for the puzzle to be solved. This challenge is fine with the *Rising Sun* of Japan because each piece of that puzzle is unique (that is it can be correctly placed in only one position). However, the *Union Jack* and the *Stars and Stripes* comprise components which in some



cases appear to be exact duplicates of each other and yet the program will not allow you to use them interchangeably. That is to say, you may appear to have solved the puzzle without actually having done so. Were I a highly-strung person I should have torn out my hair over this. Being the balanced, well-rounded individual that I am I merely cried 'Cheat!' and stopped playing the game.

A second limitation is that flags are boring. Especially when there are only three of them.

Now I may have been brutally disappointed by these twin defects but I didn't simply go home sulking with my disk tucked under my arm. I wanted to check out an idea I had about how the patterns were stored. A simple SuperBasic experiment provided the answer...

LBYTES flp1_jack_data, 131072

... nothing fancy, no compression, just a good old-fashioned 32k screen file.

What if I saved a screen of my own as *flp1_jack_data*? Would the program load it? Yes! And not only did it load my DIY picture but also mixed it up and BEEPed its agreement and approval when I'd put it back together again. Even the HELP worked! The only anomaly was that it filled in the missing bottom left hand rectangle with 4% of the Union Jack!

So there is a possible resolution to my complaint. If the available screens were interesting pictures rather than these tedious flags and if none of their individual segments had an exact duplicate elsewhere in the puzzle then this otherwise laudable game would be a stimulating and satisfying plaything indeed.

Enough said.

QUADLINER/OTHELLO

I've lumped these together under one heading because of their similarities, both being straight copies of popular strategy games. *Quadliner* is better known as *Connect Four* and *Othello* is better known as *Othello* (and sometimes as *Reversi*).

In *Quadliner* you and the computer take turns in slotting coloured discs into spaces in a 6x7 grid. Your object is to assemble a line of four discs in a row, column or diagonal while simultaneously blocking the QL's cunning attempts to do the same.

Othello is fought out between computer and operator on what is essentially a chessboard with squares all of one colour. Starting from the centre the players build outwards by alternate placement of counters until the board is full. On each go your aim is to trap one or more opposing counters between two of yours. This enables you to gobble them up and replace them with your own. The victor is the one who finishes with most counters.

In both games the graphics are somewhat spartan but perfectly adequate for their purpose and a running record of wins losses and draws is displayed on screen. The games are simple to play and mildly addictive for a while (if that is not a contradiction in terms!). The QL plays a good game and is very fast. Because of the computer's lightning reflexes and apparently instantaneous response time it is easy to find yourself being drawn into a frenzy of rapid move-making which can lead to mistakes and unexpected losses. Of course the pressure to move quickly is imaginary and self-imposed and if I take my time I invariably win.

But that takes all the fun out of it! So gird your loins! Compete at breakneck speed, win some, lose some and enjoy!

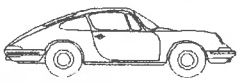
CONCLUSION

5GP readily and cleanly multitasks with other programs (in my case under QPac2 with text87plus4 always present in the machine). This enables me to switch occasionally from my main and more important activity (writing) into the leisure software and back again. I find there is some slight deceleration of the wordprocessor when *5GP* is loaded, though nothing too serious. In my view this is how Wreford's package works best, for intermittent use and occasional relaxation (this comment is not intended to trivialise the software and indeed should be regarded as a major plus). Credit should also go to the excellent *Q_Liberator* with which this suite of programs was compiled.

I would like to see *Roulette* substituted by another game (a *Yahtzee!* clone would be a good candidate) and the few other changes I've outlined. Programming and presentation are excellent for which much praise is due. However, *Five Game Pack* is something of a mixed bag and would benefit from further work and improvement. This is a commendable product and good value for money but Wreford Davies scores points for ingenuity rather than for innovation. He has successfully and stylishly taken five old favourites from the department store shelf and transported them to the QL but he offers no fresh ideas or original games to challenge us.

Chris Berry

5 Game Pack can be obtained from Dilwyn Jones Computing (0248) 354023, 41 Bro Emrys, Tal-Y-Bont, Bangor, Gwynedd, LL57 3YT. It is priced at £12.50 (UK), £13.50 (Overseas). It is suitable for an unexpanded QL and can be supplied on disk or microdrive.



FAST-NET

The idea of a new and faster Network for the QL came from my experiences in the use of the existing QL Network. I use the network mainly for linking my Test-Bed QL to my main QL that has a Gold Card plus a 30mb Hard Drive. My main QL has all the information that I need stored on the Hard Drive, consequently when I need to program an Eprom I connect my QEP3 to the Test-Bed QL and access all the files I require over the Network. To my dismay I found the existing QL Network to be very slow and occasionally locked up, also if someone was working on the Master QL everything stopped whilst the Network was being used.

After all this I got to thinking if their was anyway I could improve the Network, but after looking into how the QL Network worked I found that it was impossible. Thus the concept of a new and faster Network came about.

After some thought I decided that I needed some help in designing a new Network so I asked Terry Harman (hardware design) and Phil Borman (software design) if they liked the idea and if they could help. They both agreed that a new network was needed and also it would be nice if it could be designed with the ATARI ST running QDOS in mind. At this point it was down to the drawing board.

Various versions of the hardware and software were produced and it has taken roughly a year to produce the final prototype version.

The new Fastnet uses software derived from the Midinet system on the ST, so has been thoroughly tested, but is coupled to totally new hardware capable of transferring data at 500Kbits per second. As an indication of the speed the Fastnet is capable of Xchange executes from a remote winchester hard disk in 8 seconds. It takes 12 seconds to execute from a local floppy disk. Built into the Fastnet is an advanced 'read-ahead buffering' system which vastly improves the efficiency of reading small amounts of data. This improves the performance of directory maintenance programs such as QPAC 2.

The hardware of the Fastnet consists of a minimum of two interface boxes which plug into the ROM ports of the machines you want to connect. The interface box contains two 3.5mm jack sockets, two LEDs (Light Emitting Diodes) and the interface board. The interfaces are connected together using the QL network cable supplied with the original QLs. This is a thin co-axial cable terminated with 3.5mm jack plugs. If you do not have one suitable cables in various lengths will be available from me. The two LEDs are used to indicate that the network is being utilised, one LED being for transmit and the other for receive.

Once the hardware is installed on the machines you wish to network the software that controls the Fastnet has to be loaded. There are two main parts to the software. There is the Device Driver and the File Server. The Device Driver is responsible for transferring data between your machine and a File Server on a remote machine. The File Server is responsible for dealing with requests from remote machines without the need for user intervention.

Once the software is installed you can use the 'N' (it can be renamed) device just like any other QDOS device. A number after the N is used to distinguish which networked machine the files have to transferred to. As an example using N3_ will send all files to the machine with the 'station ' number of 3.

The Fastnet is easy to use and above all it's Fast..... It really does transform the networking capabilities of QLs and STs.

Ron Dunnet

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All prices Include Medium but not P&P. Please refer to P&P Guide. Medium is 3.5in DS/DD.

New QL Hardware

Fast-Net: Local Area Network, enabling connection between QL & QL, QL & ST, ST & ST (ST must be running QDOS). Fully compatable with existing hardware expansion systems (Gold Card, Trump Card, Super Q Board etc etc). Runs approximately 9 times faster than existing QL Network. Plugs into QL or ST ROM slot via ribbon cable and tongue. Can utilise existing QL Network Cable. Software includes File Server. Full Documentation included. Minimum Configuration 2 Units £120.00p

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New Hardware in Pipeline

QUBIDE: IDE Hard Disk I/Face, allows connection of 16 bit IDE Hard Drive, upto 120mb, to the QL. Plugs into ROM slot. Software built in.

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P&P Guide for PD & Shareware

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10-12	1.25	2.50	3.00	3.25	22-24	2.25	4.50	5.00	5.25

NEW FROM SOFTWARE 87 February 94

plus4 publisher 2

The latest version of the QL desktop publisher which offers true professional quality results, this modular system comprises three programs: **plus4**, **LINEdesign 2**, and **publisher's pack**.

LINEdesign 2

This program features extensive commands for accurate drawing using lines, rectangles, poly-lines, ellipses, and bezier curves. You can apply gray shades, fill patterns and outlining to surfaces. Once you have drawn an object, you can move it around the page, copy, enlarge or reduce it, expand or squash it, rotate or transform it *without losing any detail and without affecting other objects on the page.* **LINEdesign** can do the same with text, combining any of over 130 scalable founts supplied. These are not bit-mapped founts as used by other QL programs. Each fount can be printed in any size from small print to huge headline without jagged edges or loss of quality. Text can be rotated to any angle, shaded, slanted, even distorted for special effects. Supports Laserjet, Deskjet, 24-pin, 9-pin and bubblejet printers in resolutions of up to 360x360 dots per inch.

Version 2 offers the following: Massive speed improvements in both display and printing. More comprehensive support for different types of printers, including high-resolution modes on 9-pin dot-matrix printers. A wide range of symbols including mathematical and scientific symbol sets. Easier selection and manipulation of objects. Support for page sizes larger than the A4. Different line thicknesses.

plus4 version 4

In response to requests from users, we have incorporated tens of small but significant improvements and a handful of major ones in the latest version of **plus4**. These include interactive design and modification of rulers (you see the effect on text format on the screen as you change the ruler), the selection of ruler by pressing the up and down arrow keys, and the ability to search for paragraphs formatted under any ruler and to change the ruler if required. The selection of screen founts is now easier than ever, allowing you to load, zap and attach founts interactively. When you are happy with your selections, one single command will automatically save the configuration for future sessions. A new macro/glossary function allows you to use the control key plus most letters to invoke command sequences or up to several lines of text, bypassing the menu system. Macros can be recorded as you press the keys to perform the operations and can also be edited as text files.

publisher's pack

This disk contains the component programs which combine the text editing and printing capabilities of **plus4** with the graphic and fount handling power of **LINEdesign**. You compose your pages in **plus4**, using any combination of founts, rulers, frames, etc. With only one command, a page is transferred to **LINEdesign** ready for printing or adding graphics and enhancements. Step-by-step instructions, and sample documents provide all you need to start your own professional looking publications.

fountext94

This is the new set of graphic mode printer drivers which replaces **fountext88**. In addition to the original drivers, there is a new high-resolution driver for 24-pin and compatible bubblejet printers. The new driver prints at 180x180 dots per inch (compared to the original 60x60) and thus offers three times the resolution. Printing is still very fast, allowing the driver to be used for large documents. An extra disk containing a large number of additional founts is supplied with the driver.

typeset93 and typeset94

typeset93-ESC/P2 is a dedicated driver for Epson Stylus and other ESC/P2 printers such as LQ100, LQ 570, etc. Supports internal scalable and bit-mapped founts.

typeset94-deskjet caters for all HP deskjet models including the latest 310, 510 and 550. It supports a wider range of both internal and cartridge founts than **typeset90**.

Two new dedicated drivers for HP Laserjet printers will be released in March. **typeset94-II** for HP Laserjet II will support a selection of HP fount cartridges. **typeset94-IV** will support the built-in founts of HP Laserjet III and IV.

We also supply other exciting programs that are the best in their category. Programs such as the new spreadsheet, **QSpread,** and the new database manager, **DATAdesign,** which run under the Pointer Environment.

plus4 and plus4 publisher software	
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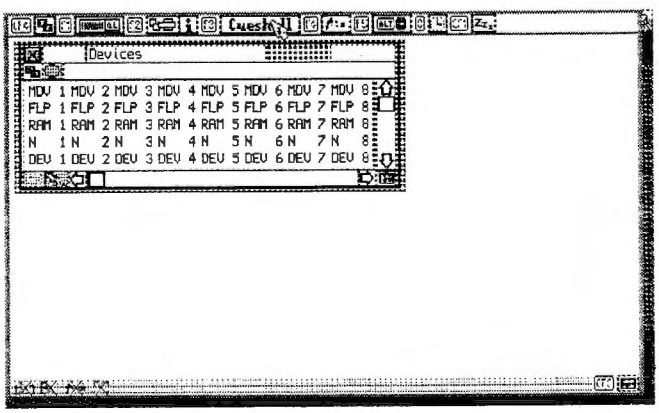
CUESHELL

Cueshell from Albin Hessler Software is billed as *"a desktop program intended to perform some everyday tasks in the computer in an easy way"*. It works within the Pointer Environment and provides a pointer driven interface to control basic operations like copying files, starting programs etc.

The program comes with a small, 20 pages or so, A5 manual. The manual consists of two parts; the bulk of the manual is made up of the Cueshell instructions while the rest is devoted to a description, often detailed, of the Pointer Interface. The manual is easy to follow and is presented very well with the copious use of actual screen shots. The descriptions of the actions available are described very well and do not assume you know all about the Pointer Environment or QDOS. As an example the description given to a HIT as defined by the Pointer Interface is given as *"HIT is generated when the left mouse button is pressed. As the Pointer Environment allows keyboard control as well, pressing the SPACE bar also generates a HIT. A HIT means that the related program option is selected, which is more than simply being available. A selected item is normally marked in a highlighted colour or with a graphical object in an obviously different shape. A HIT normally does not lead to an*



action, only when a pure selection obviously does make no sense or if the related action is easily reversible.". Albin Hessler has obviously listened to the criticisms that say the Pointer Interface is difficult to master and has produced a manual which starts off with the basics. One amusing slip up in the translation process of the manual (Albin lives in Germany) occurs in the Limited warranty section where it says *"As we can not control all possible hard-and software constellations under which the program may be used ....."*.

Starting the program is simplicity itself either type in EX FLP1_Cueshell if you have the Pointer Environment loaded else type in LRUN FLP1_BOOT as explained in the Quick Start section of the manual. A strange omission before this section is the usual "IT IS ADVISABLE TO MAKE A BACKUP OF THE PROGRAM FIRST" warning. I know most people rigourously take backups first but it's always useful to be prompted before any damage can be done. It is in the License Agreement section but it is nice to see it in Big Bold letters.

Once loaded the main window appears as per the screen shot on this page. Most of the items across the top of the main window are called menu items, the others are standard Pointer Interface control symbols (all explained in the manual of course). Pressing the space bar or left button of a mouse, a HIT, on these menu items usually brings up another menu selection. The menu items are :

SYSTEM CONTROL (looking like a QL) - This allows you to change the keyboard, mouse and clock settings of your system. The options given range from changing the autorepeat delay of your keyboard to changing the year of the QLs clock. In each of the three options a submenu is given on the screen for you to choose your settings. Changing the settings is a simple matter of selecting the item you wish to change and then either press the arrows either side of the value to add or take away from the number or type in the actual number you want. To action the changes you just need to highlight the "DO set values now" option. These changes are, however,only temporary and remain in effect until the QL is reset or powered off. If you wish the parameters to remain the same everytime you boot-up with Cueshell you can save these values permanently with the program using the "Save values with configuration" option, although the clock settings are excluded for obvious reasons.

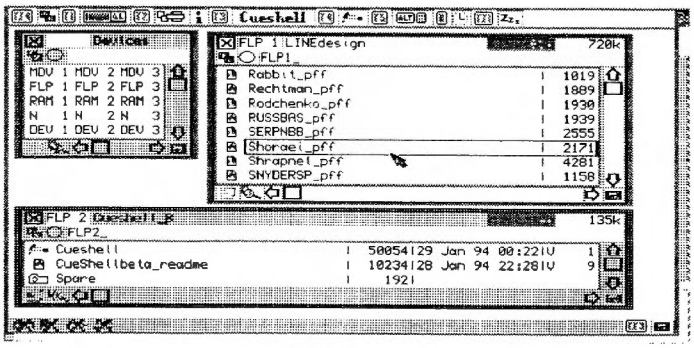
WINDOWS CONTROL (looking like outlines of windows on the screen) - This shows a list of all the catalogue windows (explained below) that are open. You then have the option of either closing them all, closing one or selecting one.

INFO (looking like an i) - This shows you the largest free space in memory.

CUESHELL

CUESHELL (looking like CUESHELL, are you getting the idea ?) - This allows various options in particular the options to Quit Cueshell, Create a new directory, change the sort order and configure the program.

JOBS LIST (looking like, I think, an ink quill pen) - This shows you all the jobs that are present and allows you to remove, change the priority or pick a job.



HOTKEYS LIST (looking like an ALT key) - This option lists all the hotkeys (a hotkey is a key pressed together with the ALT key defined to do a special user defined function) that have been set up within your system. It allows you to action a hotkey, remove a hotkey or turn it off or on. This is very useful if you can never remember which hot keys you have set up.

CLOCK (looking like, would you believe it, a clock) - This shows the actual system date and time.

All the above are useful utilities in their own right but the main purpose of Cueshell is the easy management of devices and files.

This is achieved through the use of a Device window and Catalogue windows. When Cueshell is initially loaded, before being configured, all that is shown on the screen is the main Cueshell window together with the Device window.

The Device window contains all the device names available for use ranging from MDV1_ to DEV8_. HITting a device name (pressing the space bar or left mouse button) changes the pointer from the normal arrow to a moving image showing a file being transferred between two disks. This is called the copy sprite. You can then move the pointer to over another device name or to the bottom line of the Cueshell main window, pressing the right button or enter allows the action to be started. If the pointer was on a device name then the options to either update (only files which exists on the destination device are copied) or backup (all files are completely copied to the destination) are given. An additional option to move is given if the destination device is the same as the source. Once you have highlighted which option you would like and said it is OK to proceed the action is completed. If the pointer was on the bottom line of the Cueshell main window ,called the delete bar, then two additional options are given to either format the device or delete its contents.

The catalogue windows are accessed by DOing a device name. This brings up another window showing the files and directories that exist on the device together with the file length, the update date and the version number. From this window you are given the opportunity to rename a file simply by typing in its new name, show the contents of a directory , copy and delete files or directories, sort the files by name, time, type or size (up to four levels can be specified such as sort by name first then by type), view files and execute files. The execute files menu is capable of executing Psion programs, programs which require Guardian windows (older programs which write directly to the screen memory), SuperBasic programs which can be a QLiberator_sav file a SuperBasic program or a SuperBasic extension file normally loaded with LRESPR. All Cueshells windows can be resized and if you save the configuration the next time cueshell is used it will present you with the same window structure, providing you have the same devices attached.

As you can see from the above Cueshell comes with most of the options needed for your average QL user, if there is such a person. Most of the commands are all presented graphically and are very easy to control with a mouse and a keyboard. If you are a keyboardphobe and use the Pointer Interface then this package is a must. Even if you use, or struggle, with QPAC2 I would say this compliments rather than competes with an already excellent package.

Derek Fish

Cueshell can be obtained from Dilwyn Jones Computing, Jochen Merz or Albin Hessler Software and is priced at £40 from DJC (overseas add £1.00) or DM 99,00 from Jochen Merz or Albin Hessler Software (cheques only), see page 3 for addresses.

IMAGE PROCESSOR 2

I happened to be reading a review of a drawing package printed in a popular weekly computer magazine when the above arrived, a program to be reviewed; what a coincidence I thought. A little later, I read through the magazine and came across a further two reviews of other graphic programs and the coincidental awe somehow faded; there would seem to be an upsurge in this field. Being a devotee of other people's quotations, I am always aware of the expression, "*...if you have to ask the price, you can't afford it!*", so I looked for the price tags. This one costs £15 as per the Dilwyn Jones Computing advertisement in the recent issue of QLW; the one I had been reading was offered at £495. " *Well, yer pays yer money*" etc.!

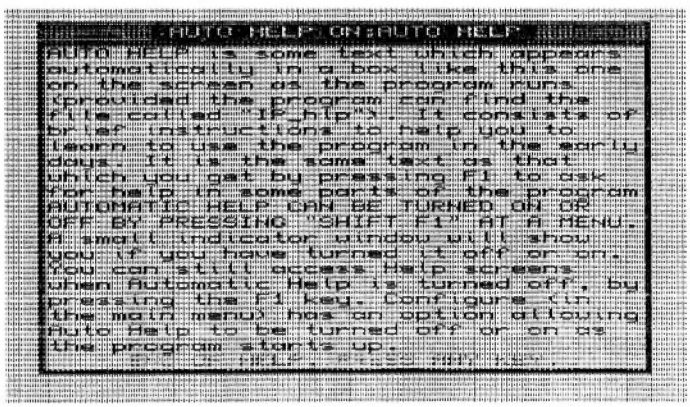
This program comes on one 3 1/2" 1440 sector disk, and occupies 963 sectors including a couple of pre-drawn screens to practise on and many fonts, together with an UPDATES_doc file; it needs a memory expansion of at least 512k. It comes with an A4 (reduced to A5) manual of 28 pages jam-packed with information on what the program would do for you but oddly not as comprehensive with instructions as you might wish; however, this is supplemented within the program via an extensive automatic HELP_ system where instructions and explanations are given in profusion depending on where you are in the program and upon what subject. As is mentioned in the manual, this auto-pop-up help becomes irritating once you have become au fait with the 'help' so there is a means to quell the 'popping-up' but still having the facility omnipresent via the F1 key. In my own instance I felt it to be essential to print-out the HELP file so having it 'under my eye' as it were, for perusal when I feel the need rather than having to wait to arrive at that subject in the program before being able to see the HELP text. A browsing subject list is provided which lets you get into the help file to read as a book.

The manual has a comprehensive CONTENTS list on the inside of the front page and under closer inspection there are also a number of sub-sections in various sections. For instance, the CONTENTS listing of GRAPHICS - lists on the same line, separated by commas, ten other headings.

As the manual explains, the program handles pictures, allowing you to 'touch-up' existing screens, tidy up pictures from a digitiser in addition to being a free-hand arts and graphics facility. Thus, pictures (or clipart) may be imported from elsewhere and improved upon by re-colouring, enhancing of digitised pictures, converting to cartoon outlines, removing colour for monochrome output, adding text and touching-up the graphics, printing screens, using block handling moving parts of screens to other screens and zooming in on a section for fine detail pixel editing.

At this point I can tell you that I know of at least one person of exalted status who uses this program as a preliminary fine-tuning before using the picture/s in a DTP program, LINEdesign, for final production of a QL magazine. (Could it be this one I ask? *[I confess all]*)

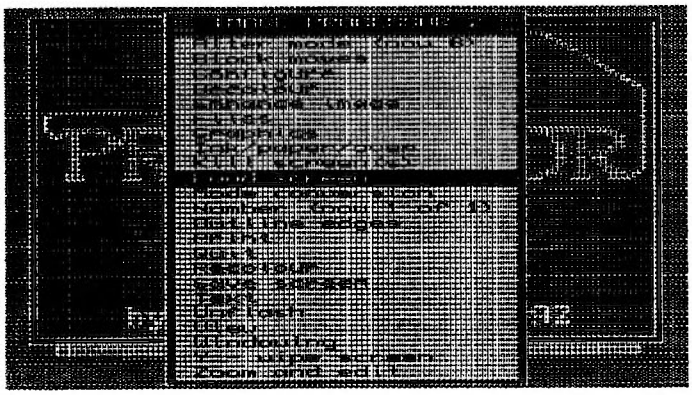
Before using this program make sure you have a backup copy; there is a short BASIC program on the disk to do this, alternatively you can use the Wcopy from TK2 or any other preferred method. The program is not copy protected. Might I suggest, with emphasis, that you also make a 'working-copy' as this program interplays between the 'open-write' disk and the computer and I am not at all confident yet that naughty things are not being done to the program on the disk by the working program in the QL.



Section 7 of the manual deals with STARTING THE PROGRAM but, whereas you and I might be thinking that 'starting' was simply to turn an ignition key, not so here. There is a catch 22 trap to entertain you that has its constituent parts in the BOOT and in the program's CONFIGURE file. It lies in the fact that the program allows you to put the HELP file onto a RAM_disk in the computer memory, (giving a faster response than does an external disk also saving on wear and tear of disk drives), but in order to do this, first the BOOT file must be edited at line 50 to remove a 'REMARK' word that lets the remainder of the line become an active part of the booting process allowing the RAM loading to take place. I might even have found a bug if I could be certain of what a bug

is, in that should you not edit line 50 in the BOOT program and yet leave the CONFIGURE file still trying to load HELP onto a non-existent RAMdisk, then, after a normal booting-up something happens that makes you wish you'd kept to pencil and paper; your eyes go pop-eyed trying to overcome a flashing nightmare from which you can't escape. Keep your nerve though and you can still operate the cursor keys moving the highlight down the barely seen MAIN menu to the QUIT command when you'll be asked if you really do want to quit the program.

On booting up with the disk in FLP1_ a screen comes up



listing STARTING DETAILS which is the list of defaults. These are fully configurable and are: Screen mode 8; one screen only, (out of an available number 1-9); loading a title screen called 'IP_scr'; load a text font called 'SERIF_font; default drive FLP1; HELP file on FLP1; default printer device SER1; default filename extensions: _SCR(ordinary QL screen; _COM(compressed screens); _FONT(text fonts); keyboard acceleration on; automatic help screens on; dot matrix printer graphics mode CRT 2(90 dots per inch(dpi) across). My machine says 720dpi per 8in across, same thing.

At this stage, the manual explains in some depth, the meaning of a number of terms, such as those defaults just mentioned, plus some others you will see later in the MAIN MENU.

Section 9 deals with STARTING TO USE THE PROGRAM. (Yes, I know but it is right, read it through again.) This is where the MAIN MENU pops up, where you CONFIGURE the defaults, in particular change the HELPfile default from FLP1_ to RAM1_ but only if you intend to edit the BOOT program, line 50 as mentioned before. You will already have had some experience of the HELPfile doing its damndest to help you but this can be re-arranged by suppressing it but it still remains available through pressing F1 or SHIFT F1. Pressing F1 in the MAIN MENU brings up the browser subject list, shown across two pages, pressing 'other' to select the other page, then asks you to type the subject word you wish to read. If you've forgotten the word, pressing 'other' brings it up again. Pressing SHIFT F1, when in a menu, toggles HELP on and off.

The MAIN MENU has 23 headings and against some of them a small arrow indicating sub-menus. A full explanation of what every heading does is included, and in a number of cases how it does it, but mostly, the instructions come up in the HELPfile.

LOAD SCREEN allows several different picture types to be loaded. Picture types which are recognised automatically, in modes 4 or 8, are uncompressed QL pictures, Image Processor/Page Designer2 Plus compressed format, The Painter or the The Clipart files. It cannot load pictures in any other format such as extended mode 4 on the Atari emulator or Miracle's QXL screens. It may have difficulty with screens from a QL scanner which produces 'short files' (ie. an incomplete screen of less that 32k in length). It may be possible to overcome this shortcoming via TK2 by expanding the screen to a full 32k in length before you try to load. There is a 4 line listing included to do this for you. Two example screens are supplied to practise upon, IP_scr and STEAMTRAIN_scr, (which is a mode 4 screen).

GRAPHICS drawing facilities included are : ARCS, BRUSH, CIRCLES & ELLIPSES, ERASER, FILL, INK & PAPER, LINE, POLYGON, RECTANGLES, SPRAY. There is a QUIT graphics menu choice. On a blank screen, (or upon an existing picture), on choosing the option ARC a 2in. curve will be placed in the centre of the screen. You can, using the cursor keys, move one end around the screen then the other end,swap both ends over, control the angle of the arc, lengthen and shorten. The others graphics are dealt with by similar methods of selecting a menu option and using the cursor keys.

The SAVE SCREEN option lets you save pictures in one of three ways, Compressed, Painter Compressed or Uncompressed. (Note that there is a significant amount of information about LOADING in this section so it is better to read it in conjunction with the section on LOADING

SCREENS).

Now we come on to TEXT. The manual says the feature is complex and it certainly is. There are 22 fonts available on disk, others may be added from time to time and will appear in the UPDATES_doc file. A small menu starts the selection process, Loading the font, typing the text or quit. All other options, of which there are enormous numbers, are available from key presses whilst typing the text onto the picture. I've thought about 'curving' text and how to get this program to do it but so far I haven't been successful. I know it might be done simply by attaching the text to the 'ARCing' facility then bending the arc but, there you are, ask Dilwyn.

Having got this far all one needs now is to get the work-of-art printed out upon paper and Section 24 deals with PRINT. You must read this section in conjunction with the section on Configure which contains a fair bit about printers and the like. This program has drivers built-in for three types of printer plus an option to link-in your own external driver if you wish. Instructions for writing such drivers are in the EXTDUMP files on disk, assembler and basic. Information on how to write external drivers is also included.

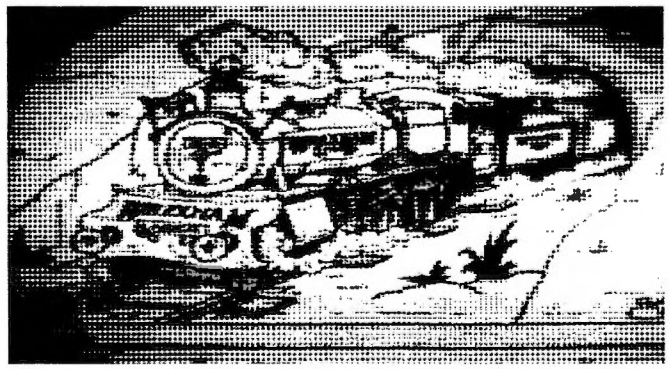
The 3 types are:

1 - 9 pin mono dot matrix. 2 - shaded
3 - 24 pin mono dot matrix. 4 - shaded
M - Mono deskjet 500. S - shaded
External dump

Pressing the number or M, S and E will select an appropriate printer option. Shaded output is slightly slower than mono output. Mono output will be darker, less 'dotty' and less 'streaky', at the cost of loss of colour detail. Only you can decide what is suitable for whatever it is you are currently trying to do.

M and S dumps are printed at the 'currently active print position' so set the start position from Basic first. Some early models of the Deskjet printer do not recognise the command used; there is no other way known to get this to work. The command used is ESC*r1A - if your printer manual does not specify that this is a supported code and your attempts to set a margin are ignored, this is the likely cause. Press E for an external dump which works if an external dump is available but beware the program may crash if no external dump is in place. To avoid this risk, there is a dummy dump called Dummy_ExtDump_CDE on the disk, this should be LRESPR'd before the program is started or added to the BOOT program.

You are given, in the the manual, a little table on how to predict, in inches and/or millimetres, the size of the



printout on the basis that a QL screen is 512 dots wide by 256 dots high, the sort of simple concept that many of us never manage to think about.

The best part of this program is being able to 'touch-up' pictures that have rough edges and stepped zig-zag characters and perhaps having inappropriate colours then seeing the final outcome, a picture of immeasurably refined quality that 'knocks' your eyes out. The 'proof of the pudding is in the eating' and proof of this program is beneath your very eyes; if this review has been 'lifted' from its original publication then shame on the 'lifter' for not acknowledging the 'lifting'.

All this only £15 - what more could you ask. Eh! What? Yeah, I see. TALENT uh!?? Well, I can't hang around here all day chit- chatting about nothing in particular; I've got to get back to my project up-dating that STEAM-TRAIN to MAGNO-LEVITATING-MONORAIL-TRACK-TRANSPORTATIONAL-CUM -CARRIER-POWER-UNIT,(in brilliant full colour).

John Reeves

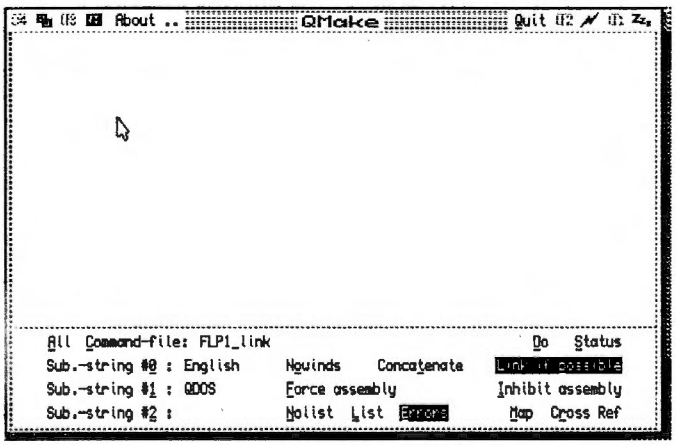
Image Processor 2 costs £15 (UK), upgrading from older versions costs £10 (send your old master disk or cartridge with order). Overseas postage & packaging costs £1. A demo version is also available (on disk only) for £2. It can be obtained from Dilwyn Jones Computing (0248) 354023, 41 Bro Emrys, Tal-Y-Bont, Bangor, Gwynedd, LL57 3YT.

QMAKE

QMAKE from Jochen Merz Software is a utility to allow the easier handling of the Assembler and Linker for assembler programs, it also makes the process more automated.

The program has been specifically written for the original GST Assembler and Linker or the Quanta version of the same program. However, it is recommended to use the Quanta version as several features are only available if you use this new updated version. The author, Bernd Reinhardt, has combined 7 years of assembly language development experience to provide an extremely helpful utility for the development of modular programming.

The program comes with a small A5 nine page manual which details all the functions available. It is perfectly adequate and assumes you have your assembler and linker



manuals with you for reference. Not an unreasonable request.

When the program is first executed it turns itself into a Button. Pressing the right mouse button or enter while the pointer is on the button brings up the Qmake screen as shown in the screen shot. The program can be used as supplied but the defaults for various options may be wrong for your set up. To cure this you have to configure the program, this is a simple matter (as with most Pointer Interface programs) of either using the standard QJUMP configuration program CONFIG or using MENUCONFIG from Jochen Merz, both are supplied on the master disk.

The major items needed to be configured are the Linker type. This will always be GST/Quanta until the QJUMP linker is available. There is an assembler control, which is used to pass options to the assembler such as Errors, Nolist etc. Nowinds (only available in the Quanta version) and Linker control parameters can be defined. The assemble and linker filename or Thing and substitution strings as detailed below.

Once Qmake has been configured for your system the program is ready for use. The first action is to write a link control file for your masterpiece (assuming it is written). This could be a standard link control file or one written to take advantage of the extras Qmake offers. An extract of the control file from the manual is below as an example.

```
program win1_qd_#0
input  win1_qd_util_lib
input win1_qd_#0_rel
library win1_lang_#0_lib
```

If you use this file as straight input into the normal linker it would complain as the lines with #0 in them do not exist. If however you use Qmake to parse the file before the normal linker it would look like:-

```
program win1_qd_English
input  win1_qd_util_lib
input win1_qd_English_rel
library win1_lang_English_lib
```

The #0 have been substituted with the sting set up in the configuration (or overridden for this session of Qmake), in this case English. Up to nine substitution strings can be defined although only three can be changed easily. This is performed simply by a HIT on the string, this cycles through the three alternative values you have defined. The default values of the program give an indication of its use as #0 is defined as either English, German or French and #2 is defined as either QDOS or SMS2. This is a very useful feature as it allows you to have only one link control file for all versions of the program you are producing. You can even select that all languages are made each time you perform a make run, therefore ensuring all versions are the same.

Pressing DO on the menu then starts the ball rolling. Qmake automatically starts the assembler and linker when necessary and decides whether the source code has to be re-assembled. This depends on various conditions, an example is if the _REL file is older than the _ASM then it is automatically assembled before it is linked. These rules are given in the manual and can be overriden with other options such as Force assembly. If an error is found Qmake displays the listing for your perusal. If all is successful Qmake beeps (if configured to) and waits.

Bernd Reinhardt has produced an easy to use and very useful utility for machine code programmers. Qmake does all the things it sets out to do and makes (pun intended) keeping the source code up to date a lot easier. I have also noticed version 2 has been announced, more useful features no doubt.

Derek Fish

Qmake costs DM 44,90 and is available from Jochen Merz Software. See page 3 for address and p&p details.

SOLITAIRE

If you're prone to acronymania, you'll appreciate the subtle vanity of author Robert G. Schubel in cleverly naming his program a *SoftShoe* production...

Solitaire (version 1.01) was originally distributed by Sharp's (CardSharps?) of Mechanicsville, Virginia. Rules of play were included on the game disk/cartridge as a Quill document. Now EMSoft of Boston, Massachusetts have become *Solitaire's* US distributors and they have made several improvements. The first is to provide a printed instruction booklet with the program . The other is to supply a free Poker game.

Solitaire is a *Q_Liberated* SuperBasic program and multitasks comfortably under *QPac2*. This review is being written using *Text87* and I can <CTRL-C> back and forth between the game and the wordprocessor without difficulty. However, I lose SuperBasic unless line 30 of the BOOT file is amended to read 'EXEC flp1_sol_bin', in which case I regain access to the interpreter but some peculiar things happen to my *QPac2* 'buttons'. I tried to multitask *Solitaire* and *Text87* without *QPac2* but failed to get things working satisfactorily, even using *Solitaire's* own mulitasking facility.

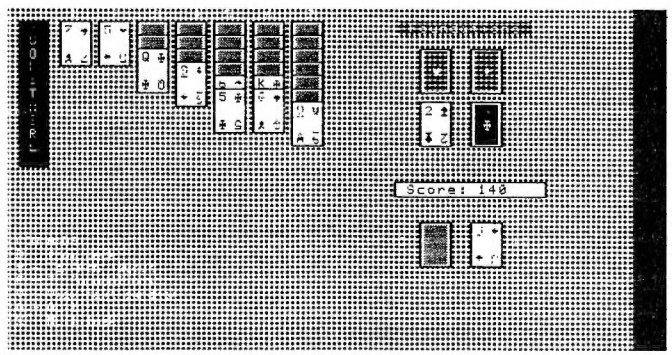
After the title screen blanks you're encouraged to press <ENTER> which gets you the *SOLITAIRE HIGH SCORE TABLE*. Continue with <SPACE> then choose a level of difficulty (easy or hard) and mode of play (points or Las Vegas). The pack is then given a SoftShoe shuffle and twenty eight cards are dealt in the triangular arrangement familiar to Klondike/Canfield aficionados.

The 4-colour-mode display is neatly laid out and the playing card icons are quite acceptable (no graphics on the picture cards though). Screen update is efficient and program execution is nice and snappy.

User input is by single keypress. Tableau columns may be specified with numeric keys <1> to <7>. You can <V>iew cards in the stock, transfer cards from <D>eck to tableau and thence to the <F>oundations. Use <Q>uit if you're stuck (I would have preferred <ESC>ape) and <X> to multitask *Solitaire* with other programs (but see paragraph 3 above).

The player adds cards to the seven-column tableau and sorts them into descending alternately-coloured sequences. There they remain until becoming available for transfer (in ascending order by suit) to the four foundation piles.

This is a difficult game to complete successfully but after each attempt you are given either a points score or a debit/credit in US dollars (Las Vegas option). The high score table is updated



whenever necessary and saved to disk for future sessions as is your account balance if you prefer the gambling version.

The DJC Software Catalogue describes Solitaire as *"very addictive (as I found out when it first arrived at DJC)."* I too was quickly hooked but I question whether the lure of *Solitaire* is a virtue of the software or a characteristic of the game itself. Given a pack of cards, a wet afternoon and a QL at the menders, I'm sure I'd have been just as immersed and infuriated and entertained. From that viewpoint I think the product maybe a

little overpriced at £15.00, even with a Poker freebie thrown in...

... speaking of which, I really did try with this one, approaching the QL all mean and unshaven with a scowl on my face and a plug of chewing tobacco gripped between my teeth. A bottle of Jack Daniels stood at my elbow and a spittoon was in easy reach...

Robert Schubel's Five Card Draw Poker (version 2.00) runs as quick and smooth as the main program. The layout is neat and tidy, the keypresses are few and easy to learn. There's no explanatory brochure, but after the title screen a window opens to display a cut-down version of the rules. This is a perfectly adequate introduction and should give you a basic grasp of the game without reference to more detailed instructions in the 650-word Quill_doc on the game disk/cartridge.

If I was playing an experienced Poker player I would expect to lose consistently, regardless of the cards I was dealt. Skill at this ultimate gambling game depends on psychology, knowing the odds and a consummate ability to bluff. Sitting in a smoke-filled room with an algorithm for an adversary is not really a comparable experience. No eye contact to make or avoid, no body language to read or repress... a contest of considerable skill is reduced to a game of chance. I've expressed a similar view on this elsewhere (cf. my review of *Roulette* from the *Five Game Pack*). You may think my criticism unfair but at least I'm consistent!

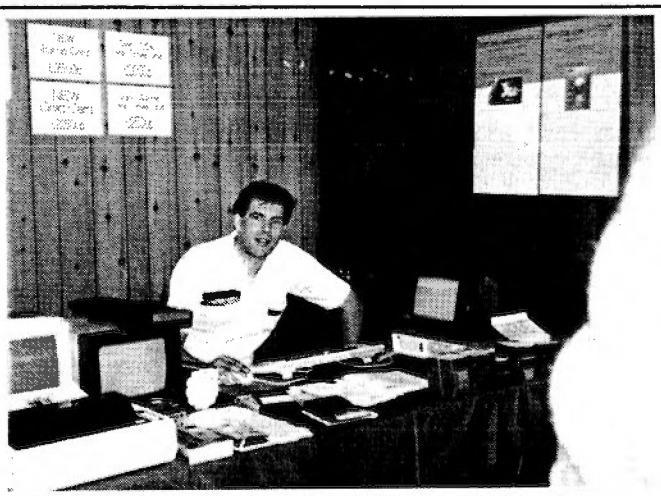
There is no mouse-driven version of either program. This *SoftShoe Software Production* would be an ideal candidate for upgrading to run under the Pointer Environment.

Give me rodent control and I'd probably say, *"The price is right... "*

Chris Berry

Solitaire is available in the UK from DJC. Supplied on disk or microdrive, it will run on both basic and expanded machines. The price is £15.00 (add £1.00 for overseas P&P) and now includes a free Poker game.

PICTURES AT A WORKSHOP



Ron Dunnett of QUBBESoft P/D

Stanley Canton of Ocean Computer Services

PHOTOGRAPHS COURTESY OF JIM BUIK

PUBLIC DOMAIN

Hello QL Users, it's time for another update regarding the QL Public Domain Scene from QUBBESoft P/D. Soon to be released will be my latest Catalogue Issue 17. Contained within the new catalogue will be the following disks:-

SPECIAL 26 : Linedesign 2 (Demo)

This is a demonstration version of the latest desktop publisher from PROGS of Belgium. One nice thing about this demo is that it is a full working version. The only difference between this and the full commercial product is that when printing you always get a PROGS Logo printed out with your picture. I think this is a very good way of 'Trying Before Buying'. I also think this will be a very popular disk.

SPECIAL 27 : Compu-Clips 1

Compu-Clips 1 is a disk full of compressed pictures (3 to 4 disks when fully de-compressed). The pictures have been converted from an IBM PC by Dilwyn Jones using his commercially available program called Convert-PCX. The name Compu-Clips refers to the fact that the pictures are all computer related. All the pictures are supplied in Mode 4 screen format (32K screens), black and white only. In their compressed state they can be used with DJC's Page Designer 3. De-compression routines are included on the disk enabling you to turn the pictures that you want into standard 32K screens for loading into your favourite graphics program.

SPECIAL 28: Bison V1.21

Bison is a parser generator in the style of Yacc (Yet another compiler-compiler which is a widely used compiler-compiler provided as part of the UNIX operating system environment). It should be upwardly compatible with input files designed for Yacc.

Input files should follow the Yacc convention of ending in _y. Unlike Yacc, the generated files do not have fixed names, but instead use the prefix of the input file. For instance, a grammar description file named parse_y would produce the generated parser in a file named parse_tab_c, instead of Yacc's y_tab_c. Source code and documentation are included on the disk. A must for all C programmers.

SPECIAL 29: Flex v2.3

Flex is a tool for generating scanners: programs which recognise lexical patterns in text. Flex reads the given input files, or its standard input if no file names are given, for a scanner to generate. The description is in the form of pairs of regular expressions and C code, called rules. Flex generates as output a C source file, lex_yy_c, which defines a routine yylex(). This file is compiled and linked with the -lfl library to produce an executable. When the executable is run, it analyses its input for occurrences of the regular expressions. Whenever it finds one, it executes the corresponding C code. Full documentation and source code is supplied on the disk.

STAR TREK Reference (2 Disks)

Star Trek Reference is everything you wanted to know about Star Trek, The Next Generation and OS9, but were afraid to ask.

Star Trek Reference comprises of Text Files which are front-ended by Ian Bruntletts 'BO-PEEP' program. BO-PEEP allows you to wander through the text files with ease either viewing on screen or printing to your printer. It is very user friendly.

Well, I'm afraid I have run out of space so that's all folks.

Long live the QL,

Ron Dunnet (QUBBESoft P/D)

p.s. for more information on the software and hardware I sell see my advert on page 31.

S.J.P.D.

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